

# Developing a Website to Preserve History of Rasnov, Romania

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By:

Mitchell Decelles  
Annika Keck  
Alexander Lagle  
Vanshika Rohera

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Report Submitted to:

Mihai Dragomir  
Mioritics Association

Althea Danielski, and Robert Kinicki  
Worcester Polytechnic Institute



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# Authorship

<b>Section</b>	<b>Author</b>	<b>Editor</b>
1.0 Introduction	Annika, Alex, Vanshika, Mitchell	All
2.0 Background	Annika, Alex, Vanshika, Mitchell	All
2.1 Brief History of Romania and Transylvania Region	Alex	All
2.2 Demographic Changes and Gentrification in Rasnov	Annika, Vanshika	All
2.3 Website Design	Mitchell	All
2.4 Summary	Vanshika	All
3.0 Methodology	Annika, Alex, Vanshika, Mitchell	All
3.1 Determine Website Features and Functionality	Annika	Alex

3.2 Develop a Mock Layout of the Website and select Database System	Vanshika	Vanshika
3.3 Obtain feedback on Mock Layouts and Website Design	Mitchell	Annika
3.4 Developing the Prototype Website	Alex	Mitchell
Appendix A	Vanshika, Annika	All
Appendix B	Vanshika, Annika, Alex	All
Appendix C	Vanshika, Annika, Mitchell	All

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# 1.0 Introduction

Culture is the set of distinctive spiritual, material, intellectual and emotional features of a society or a social group. The importance of culture stems from its potential to enrich social capital and create a sense of individual and collective belonging, which helps maintain social and territorial cohesion (UNESCO, 2021). Although culture loss is an unquantifiable phenomenon that has occurred throughout history, the causes of culture loss are more easily quantified. There are many contributing factors to culture loss including a change in demographics within an area often caused by increased emigration rates and gentrification. In 2020, there were 281 million migrants registered across the globe, which equates to 3.6% of the world's population (International Organization for Migration & United Nations, 2020). Although there are various reasons causing mass emigration, one of the more common justifications is seeking better opportunities and quality of life. At the same time, richer individuals from metropolitan areas look to purchase homes that are cheaper but provide an idyllic escape from their busy urban homes, pricing out locals who cannot compete economically (Payne, 2019).

Eastern Europe has faced major culture loss in the post-communist era due to increased internal and external migration. Rural gentrification in small towns causes internal migration because residents move to larger cities with lower costs of living. External migration is caused by the desire for better quality of life and education, and is increased during times of political unrest and governmental corruption (Tulla and Petrisor, 2020). Due to the unstable economies of Eastern European countries in comparison to Western European countries, the nations have faced a very minor influx of external immigrants, and a larger outflux of emigrants. This imbalance contributes to the loss of culture in Eastern Europe, since populations with rich culture are

moving to nations with different cultures. In 2019, Romania reported around 230,000 emigrants that left the country mainly due to governmental corruption and limited opportunities (Alexe, 2019). Alongside the increased emigration, rural gentrification is affecting small towns in Romania, which causes displacement for local populations. The increased displacement of Romanians is causing a severe loss of history in smaller towns, specifically the small town of Rasnov in Transylvania. With Rasnov's location and scenery, it has developed into a resort town which contributes to gentrification within the area (Dragomir, 2022).

Culture loss is detrimental to Rasnov, it causes lack of social cohesion and sense of belonging to a community. Cultural preservation for Rasnov residents is vital as it enables the permanent access of current and future generations to culturally important stories. Many years for ways to preserve this history and culture, through means of archival, digitization, or even sharing stories. Romania recognizes this importance and has established the Digital Agenda for Romania for 2020 which aims to promote the increase of the use of information and communication technology tools in the context of culture (Misheva, 2021). An example of a website preserving stories is *Formula As*, a popular Romanian website where readers of the online journal upload their stories and read others. Romanians living abroad read these stories to sustain connections by experiencing themselves and other readers constituting a community (Nocasian, n.d.). However, residents of Rasnov are not currently preserving their rich history and stories online because a website does not exist. A website is necessary to meet the Digital Agenda's goals and preserve Rasnov residents' stories. In 2019, the Mioritics Association took steps to remedy this, going door to door in Rasnov interviewing locals and documenting their stories and pictures to eventually upload on a website (Dragomir, 2022).

Although Mioritics made progress preserving local stories, the process of collecting just 20 households' worth of information was labor-intensive and eventually stopped due to covid (Dragomir, 2022). Other cultural platforms such as Formula As, have provided some history preservation for the general Romanian population but have not addressed the enhanced connections that stem from better knowing your neighbors in one's community. Transitioning the Mioritics Association's project to an online platform would simplify the collection process. Additionally, a website would encourage former residents to add their stories to the platform and provide opportunities to reminisce on their collective memories to better document and preserve Rasnov's history. Addressing this issue would accelerate the collection process, allow access for more people with history in Rasnov, and enable those former Rasnov residents scattered across the globe to foster connections.

The goal of this project is to develop a prototype website to aid Mioritics in their mission to provide current and former residents of Rasnov with a platform to share their stories in order to preserve the town's history and foster connections. To successfully achieve this goal, the team has the following objectives to accomplish.

1. Determine website features and functionality.
2. Develop a mock layout of the website and select a database management system.
3. Obtain feedback on mock layouts and website design.
4. Refine website layout and develop a prototype website

To accomplish the set objectives, the team plans on creating a website to allow for the people of Rasnov to upload and share historical information, such as stories, photos, etc. to encourage history preservation and for the people of Rasnov to make connections with those who have left.

## 2.0 Background

This chapter provides details and highlights of Romania and Rasnov in particular. The chapter starts with a general overview of Romania's historical and geographical facts, then describes the history and geography of Rasnov, a town within Romania. The next section discusses the changing demographics in Rasnov and the need for historical preservation. This sets up a framework that clarifies the causes of Rasnov's gentrification and displacement, which in turn has affected the cultural identity of the area. The end of the chapter focuses on website development and analyzes case studies of other platforms to gain a better understanding of what organizations have been doing in terms of historical preservation.

### **2.1 Introduction to History of Romania/Rasnov**

#### **2.1.1 Brief History of Romania and Transylvania Region**

Romania is an Eastern European country with the Black Sea to its east and Ukraine to its north and Hungary and Serbia to its west. The Carpathian Mountain Range almost divides the country in half, setting natural boundaries that help break the country into distinctive regions as seen in Figure 2.2. The three main political regions are Transylvania, Wallachia, and Moldavia. Of these regions, Rasnov lies in Transylvania. The earliest written record of people living in the modern-day area of Romania goes back to 440 B.C.E. (Beloe, 1859) but much of the knowledge known today starts after the onset of Romanization in 106 A.D. when settlers found large deposits of gold and silver in the Carpathian Mountain Range (Deletant, 2015). The Romans eventually abandoned the province in 271 A.D. after repeated barbarian attacks (Deletant, 2015).



*Figure 2.1 Map of Romania (Iovanut, 2018)*

Before the Modern Age, multiple groups took control of the geographical area: Goths, Bulgarians, and Ottomans (Ilie & Ivan, 2016). The formation of modern Romania began in the 19th century with the Revolution of 1848. In 1868, The European powers would recognize Romania as an independent country through the Treaty of Berlin (Mowat, 1915).

The name Transylvania originates in the 10th century while the area was under Hungarian rule. Its Latin roots come from a synonym, “Ultrasilvana” meaning “land beyond the woods” (Verdery, 1985). Transylvania geography is quite diverse, with mountains, plains, and plateaus all present within the region.



*Figure 2.2 Map of Romania's Historical Regions (Iovanut, 2018)*

Like the other Romanian regions such as Walachia and Moldova, different rulers and kingdoms would come and go until the region became independent. For much of the Middle Ages, Transylvania was under Hungarian rule (Verdery, 1985). During the 12th century, the area would see increased settlement from German Colonists known as “Saxons” (Verdery, 1985).

### **2.1.3 A Brief History of Rasnov**

Rasnov is located in Central Romania, about 15 kilometers southwest of the city of Brasov. Brasov, which is the regional capital of the Transylvanian Saxons, is a much larger city of the region, holding the title for the seventh-largest city in Romania. Much of the town's history revolves around Rasnov Fortress (see Figure 2.3), which the Teutonic Knights built between 1211 and 1225 to protect the village peoples from what were common occurrences of outside attacks. (Mioritics Association, n.d.). A historical resident of Rasnov explained how the town got its name in the following quote: “they settled in Râșnov; they settled where there was water, that’s how it was done. And they climbed up the crests and there the Dacians saw that down there the rose hips were in bloom. And there were rosen, there were wild roses. And they

said, it's written down in the chronicle: 'This settlement shall be named ROSENAU'" (Ilie & Ivan, 2016).

Much of Rasnov's recorded history starts in the early 16th century, where the administration of the town at the time took great care of records of the village. In 1532, Rasnov had a population of 182 farmers (Mioritics Association, n.d.) but over time the town grew precipitously. Today, there are approximately 15,000 residents living in Rasnov.



*Figure 2.3 Image of Rasnov Fortress (Ilie & Ivan, 2016)*

Prior to the ethnic migration of the Transylvanian Saxons post World War I, they settled in smaller towns all over Transylvania; one of these towns was Rasnov. During the 19<sup>th</sup> century, the majority of Rasnov's community were Saxons, with a few families being Hungarian and Romanian (Von Kraus, 2022).

## **2.2 Demographic Changes and Gentrification in Rasnov**

Throughout history, the town of Rasnov has faced changes in demographics due to the mass migration of the Saxon population and influx of Romanians. This demographic change has

led to a loss of culture and insufficient methods for history preservation because the mass migration of the dominant culture group within the town contributed to the loss of historical artifacts. The shift in the dominant culture of the town caused by the continuous demographic change, and the promotion of Rasnov as a vacation destination has contributed to the loss of culture in the town today.

### **2.2.1 Transylvania Saxons: The First Settlers in Rasnov**

Throughout Rasnov's history, there have been many demographic changes. Originally Saxons settled the town in the twelfth and thirteenth centuries, Rasnov remained ethnically German for most of its history (Gallagher and Tucker, 2000). This population significantly decreased during both World War II and the ensuing communist rule, as locals who had lived in the area for generations fled to other countries (Dragomir, 2022). The increased industrial focus during communist rule required the Romanian government to bring in workers from Eastern Romania (Dragomir, 2022). Moldovan workers moved into the houses, replacing the formerly German majority.

Surveyors estimate the current population of Saxons in Transylvania to be 15,000, however, in the 19th century they reached a population of over 200,000 people (Campbell, n.d). Even at their maximum population, the amount of Transylvanian Saxons was less than Romanian and Hungarian populations. The Saxons were a nomadic group; throughout history they continuously migrated to reap economic and social benefits. This dispersed their population over time and led to the loss of Saxon culture and history in certain areas (Von Kraus, 2019).

The Ottoman raids into Transylvania started in 1395 and continued to intensify until 1509. The raids targeted economically booming towns, including major Saxon towns in

Romania. During the 15th century Ottoman raids, Saxons were involved in administrative and judicial authority for the Principality of Transylvania. They remained involved in governmental affairs until the Unification of Romania in 1818. After the Unification of Romanian Principalities, there was a new governmental system where elected delegates represented different jurisdictions, the Saxons had two delegates. The Saxons remained prevalent in Transylvanian society until the end of World War I. In 1944 Romania signed a peace treaty with the Soviet Union which encouraged the German military to withdraw Saxons from Transylvania (Von Kraus, 2019).

The end of WWI in 1918 marked the unification of the Kingdom of Romania. After the collapse of the communist regime, the majority of the Saxon population fled Romania for West Germany. Some Saxons also moved to Hungary and others immigrated to the United States. This was an underreported ethnic migration that took place in Europe, due to the lack of documentation and the vast size of migrants; the Saxon people lost much of their heritage and traditions. (Von Kraus, 2022). A large portion of Rasnov spoke German before the migration, but the vast majority now speaks Romanian (Von Kraus, 2022). The Saxon community was primarily Lutheran Protestant, and the current breakdown of Rasnov and Romania is majority Christian. As the demographic in Rasnov changes, so did the dominant religion which led to changes in the St. Nicholas church located in the town. During the Saxon settlement, St. Nicholas was a Saxon church, but now it is a Romanian Orthodox church (Machat, 2009).

### **2.2.2 Rural Gentrification**

In addition to the demographic changes in Rasnov, the town is experiencing rural gentrification that is contributing to the changes in Rasnov's identity. Rural gentrification is, "the

desire of the new population to buy into a version of the rural idyllic lifestyle that the new residents perceive to exist” (Merriam-Webster, n.d.). Rural gentrification leads to smaller towns becoming resort destinations where locals from neighboring cities purchase vacation homes and build resorts for tourism. The higher cost of living that results from gentrification often leads to the displacement of locals from the town. As a town undergoes rural gentrification, new buildings, architecture, and the restoration process demolish local culture. Although the economic benefits like increased home values and better public services are positives for any modernizing area, there are many other issues stemming from gentrification. Romania has experienced plenty of gentrification, as changing demographics around the country increase the demand for luxury housing in urban neighborhoods (Soaita and Dewilde, 2021). After joining the European Union, Romania’s economy grew steadily and those in larger cities have capitalized the most on the increased connections to the rest of Europe (World Bank, 2019). With raised salaries, those living in cities have spurred gentrification around Romania.

### **2.2.3 Gentrification in the Brasov Region**

In the Brasov region of Romania, upper-class people from Bucharest and other large cities have prompted more frequent gentrification as they purchase weekend or winter skiing homes in the area (Dragomir, 2022). The location of the Brasov region plays a large part of this, as it is close enough to Bucharest to be a weekend destination but far enough from the more crowded capital. The three-hour drive is a manageable distance and provides an escape with clean air, scenic views of the Carpathian Mountains, and impressive historical sites. However, these weekend homes stand empty for much of the year, harming the economy and community of the area like many other skiing destination towns (Palmer and Mathel, 2010). An important impact of this gentrification is its effect on the local culture of the small towns near Brasov. New

bonds replace existing social and cultural bonds when changes in demographics happen too quickly, altering the existing identity of the area (Özcan, 2015). Although exact data for the small town of Rasnov is hard to come by, the changes observed in the city of Brasov suggest that many locals from Rasnov have moved into Brasov or other larger cities (Dragomir, 2022).

#### **2.2.4 Present Day Rasnov**

After the outflow of Saxons from Rasnov, the town underwent serious demographic changes. The majority of the current population are Romanians with few Hungarians, and even fewer Saxons. One can see this new demographic breakdown in the larger metropolitan city of Brasov, where 87.9% of inhabitants are Romanian, and only 7.7% are Hungarian (City Population, 2021). The ethnic migration of Saxons affected the town of Rasnov economically and socially. Due to the rural gentrification and development of Rasnov as a resort town, inhabitants with higher economic status moved to Rasnov to purchase weekend and vacation homes (Dragomir, 2022).

In Romania, small towns with fewer than 20,000 inhabitants represent close to 10% of the overall population. This 10% is divided into over 320 distinct towns. Demographically and economically, the development of smaller towns has helped the development of Romania as a whole because small towns present high values in diverse demographics, socioeconomics, and land-use. Increased diversity in demographics and efficient land-use boost the economy by contributing a variety of skilled laborers and effectively utilizing natural resources (Tulla and Petrisor, 2020).

The proximity of these small towns to larger cities has affected the influx of migrants and development of Rasnov. With the increasing popularity and natural beauty of Rasnov, many

workers are employed in larger cities and visit Rasnov for vacation homes and festivals. The labor market in larger cities are more diverse and accommodating, and the cost of living is more affordable in comparison to living in a resort town long term, which contributes to the appeal of living within the city. People have the ability to work in a metropolitan area but can vacation in the suburbs. As the number of vacation homes increases in Rasnov, more tourists spend time there. The visitors are intrigued by natural beauty and monuments such as the fortress, then continue to vacation in Rasnov because of the vacation home and living accommodations. The increase in popularity of Rasnov due to tourism, natural beauty, and proximity near Brasov has led to an increase in migrants purchasing vacation homes and pricing out locals (Dragomir, 2022).

Preventing these demographic changes would be extremely difficult and require government influence but preserving the culture and history of Rasnov is a manageable and invaluable task. Digitizing information can preserve these stories for Rasnov locals that have migrated. A website dedicated to personal stories and photos can satisfy the need for digitizing the process of culture preservation in Rasnov.

### **2.3 Website Design**

A website can connect Romanians and allow them to share their stories and history on a global scale. After creating a website and adding the essential features, the website is quickly and immediately available to anyone with its web address. Mioritics Association proposed that the team create a website that will appeal to a large number of Romanians living abroad and in Romania.

In web design, the creator, also known as a web designer, creates the appearance, layout, and content that visitors see from their devices. On the technical landscape, website designers utilize the HTML markup language and the CSS (cascading style sheets) to determine the look of the website's pages. Today, web design encompasses the designing of content that users with desktop and mobile browsers can access. Web designers use HTML and CSS to design the look and feel of the website. Web designers also use graphic design for images.

Website design—the process of creating websites in formats that will be displayed, shared, and accessed online—serves many uses, the most important element of website design is its functionality. The website designer also needs to make the website appealing aesthetically to readers. Aesthetics play a significant role in web design since they determine the experience of online users and their evaluation of their experience. Essentially, when users visit a website, they consider aesthetically appealing, they are more likely to visit again or recommend it to others (Jiang, 2016).

Some aspects that impact the aesthetics of a website design include its layout, imagery, color, and typography selected. These elements enrich website design since they determine how the material displays and how users will view them on their devices. Additionally, color and typography determine the readability of content on the site. The website designer is responsible for selecting the aspects that work for a client's website since the design should always match the brand image and purposes.

### **2.3.1 Information & Navigation in Web Design**

Another significant dimension to website design is how to present information to users as they navigate the website. As website designers create websites, they consider instances whereby

users might need to access information efficiently. As they design a site, it's a priority to make access easy and simple for all users and relevant devices. Information presentation is one of the most important aspects of website design. Web designers achieve their goals by optimizing the ease of navigation for users. Thus, in website design, tools that allow users to search for the information they need within the website are important (Garrett, 2016).

Some important aspects in the information of website design include the creation of valuable or worthy content, as well as the buttons and arrows that make exploration possible. Since website design aims to ultimately bring content to users, the accommodation of information and user needs is vital to success.

### **2.3.2 Database**

One of the essential components of a website used to store any type of information is a database management system. The management system will allow the admin, in this case Mioritics, to access and approve data uploaded by the users of the website. The database management system will be set up in connection to the development platform, it will be only accessible by the admin and not a user. The database will be a storage platform for all of the data that users upload to the website and will give Mioritics the ability to approve data before it is published.

### **2.3.3 Web Maps**

A web map is a map and related content in an online environment with an appropriate interface and optional functionality for queries and reports (Designing Great Web Maps, n.d.). Web maps can deliver content to the user and make the user more engaged in the website

by providing interactivity. Maps display high levels of graphics such as points, lines and polygons (Designing Great Web Maps, n.d.). Databases link to web maps that report attribute information, display images, play sounds when users click related map features, or perform analyses by accessing geoprocessing functionality (Designing Great Web Maps, n.d.). Web maps are useful when portraying information about different regions in Rasnov, which allows a user to easily find information and geospatial data. Designers conduct web mapping with a web mapping tool, then create a script to define the interface and the elements and functions provided through the interface.

#### **2.3.4 Creating Community over the Net: A Case Study of Romanian Online Journalism**

This case study of Romanian Online Journalism examines the virtual community that developed around *Formula As*—a Romanian web-based publication with eight million readers. The purpose of the study is to investigate the approach *Formula As* employs to bring together Romanians around the world into a virtual community.

To uncover the distinctiveness of the *Formula As* community, this study proposed a virtual community conceptual model containing six conditions—community self-reference, common interests and goals, membership boundaries, shared history, common discursive space, and interactivity (Nocasian, n.d.). Interactivity is an important feature of a website, it allows users to comment on others' posts and navigate a website. The *Formula As* website design is a good model, as seen in Figure 3. The website is aesthetically pleasing, uses images, and has a commenting feature.



Figure 2.4 Formula As website (“Arhive Lumea Românească,” n.d.)

The findings of *Formula As*, is that community members sustain connections and imagine themselves and others as constituting a community through the shared practices of interpreting the community texts and making public participants’ stories of involvement with the website's community (Nocasian, n.d.). These findings are helpful in the creation of Mioritics Association website, specifically because the goal of the website is to connect Romanians living abroad with Rasnov residents' stories of history and create a sense of community.

## 2.4 Summary

This chapter discussed the history and demographics of Romania and Rasnov. Our group analyzed the process of gentrification and ethnic migration with respect to the loss of Saxon history in Rasnov. The change in demographics played a large contribution in the loss of history, so the team evaluated the evolution and cause of this demographic change.

The Mioritics Association is a non-profit organization founded in 2004 that aims to protect and promote cultural and natural heritage in Romania. UNESCO chose the organization to implement the program ‘Cultural Heritage - a Bridge Towards a Shared Future’ within

Romania. The mission of the Cultural Heritage program is to strengthen regional cooperation for better protection and promotion of cultural heritage in Europe. Since 2004, Mioritics has organized and participated in over 30 events related to cultural heritage (Mioritics Association, 2020).

Rasnov's development as a resort town influenced the Mioritics Association's need to partake in a project regarding the preservation of history and increasing connection within the Saxon community.

Mihai Dragomir, the founder of the Mioritics Association, started the Rasnov culture preservation project in 2019. Prior to the pandemic, his team went door to door in Rasnov to collect stories and information about family histories in the town. They spent six months gathering this data and it spanned close to 20 families. After the pandemic started, the concept of digitization became more important to the longevity of the project. By digitizing the process of uploading stories, Rasnov locals will be able to upload information from anywhere, even outside Rasnov. This will reduce the amount of field work for the Mioritics team, and encourage the project to reach a larger audience. The purpose of reaching a larger audience is because many Rasnov locals that have migrated would still be able to share their stories and culture and rebuild the lost connection they have with the town.

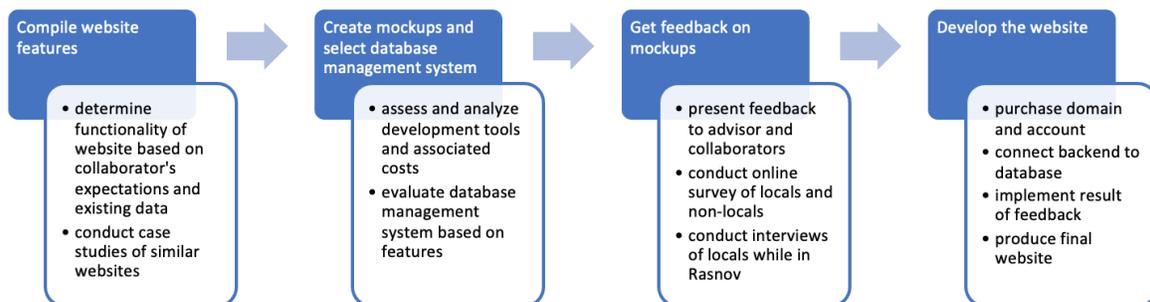
Alongside the Mioritics Association, there are many stakeholders involved in the proposed project. Due to the rich Saxon history of Rasnov, one of the major stakeholders would be Rasnov Saxons that have emigrated to different places. After the demographic change in Rasnov due to the outflux of Saxons, the culture has become Romanian, which means that any former or current Rasnov residents would be primary stakeholders.

## 3.0 Methodology

The goal of this project is to develop a prototype website to aid Mioritics in their mission to provide current and former residents of Rasnov with a platform to share their stories in order to preserve the town's history and foster connections. To successfully achieve this goal, the team has the following objectives to accomplish

1. Determine website features and functionality.
2. Develop a mock layout of the website and select a database management system.
3. Obtain feedback on mock layouts and website design.
4. Refine website layout and develop a prototype website.

This chapter explains the individual reasoning behind each objective, what methods of analysis the team will use, and any limitations the team could encounter accomplishing these objectives. Figure 3.1 illustrates the connection between the team's set objectives.



*Figure 3.1 Methodology Overview*

### 3.1 Determine website features and functionality

The first objective is to analyze the data of our team's collaborator Mihai Dragomir in his attempt to gather stories of the people of Rasnov in 2019 and to conduct case studies of websites with similar purposes. This will help the team determine a list of the most important functions of

a website that would provide people with a method to preserve the history of the town. In the limited time for the project, prioritizing these features will allow the team to allocate time successfully.

### **3.1.1 Analysis of Mioritics' Data**

Prior to creating a website, it is important to create a priority list of functionalities and features. The team will extract these required functionalities by analyzing the data that Mioritics Association has already collected though seeing what are the prevalent forms of data. Alongside conducting the analysis of data, Mr. Dragomir has provided a list of expectations for the final website. The team will use these criteria to help refine the list of features and functionality.

### **3.1.2 Case Studies**

There are websites with similar purposes of promoting culture and encouraging preservation. The team will conduct case studies on websites with similar purposes. Alongside this, there are websites that do not have the same purpose but have features and functionality that are helpful in helping digitize historically relevant pieces of information. The team has selected four websites to conduct case studies on to extract relevant information on effective layout strategies, potential features, and overall aesthetic. By conducting these case studies, the team will be able to compare the concept of the proposed to websites that other teams have successfully published. The following table outlines the websites selected for case studies and comments on similarities to justify the reasoning behind selecting the websites. The team will develop criteria to analyze these websites in a similar and effective manner.

Table 3.1 List of Case Studies

Website Title	Background	Similarities
<a href="#">Town &amp; Country of Nantucket, MA</a>	Official website for the town of Nantucket in Massachusetts. Provides background information on the town, GIS map, and access to public records with a place to post questions.	Town population is 11000 which is close to the size of Rasnov. Certain functionality such as interactive GIS maps with various filtering options, question board, and access to public records, would be applicable to the proposed Rasnov website.
<a href="#">Nakem Narratives</a>	Created by graduate students studying international affairs. Purpose is to preserve Mayan culture in Guatemala by promoting Mayan artisans.	They have an artisan profiles tab which is split up by people that they have interviewed and understood their heritage. This could be a potential way to set up the user data for the Rasnov website.
<a href="#">Roma Culture: Conservation and Revitalization of crafts, part of intangible heritage</a>	Website for a project with the aim to preserve Roma culture in Romania by promoting artisan crafts.	Project is within Romania and has translation features that are similar to the ones Mioritics wants to see for the Rasnov website. Project background and objectives are also posted and comparing them to the Rasnov project will be beneficial.
<a href="#">The Holocaust Exhibition and Learning Centre</a>	Website that publishes stories about holocaust survivors and their experiences. Stories are created by sharing family backgrounds, pictures, videos, and audio files.	The people stories are separated in two categories, by story and by resource. There are people profiles which contain all of the information and data about the person. There are resource libraries that are categorized by records, videos, and photos. These are two possibilities for sorting data for the Rasnov website.

### **3.1.3 Limitations**

Due to the limited time on-site, the team will have to short list the features using previously collected data. Also, the team must take into consideration our skill sets and use that as a basis as to what features the team would be able to feasibly accomplish.

## **3.2 Develop a mock layout of the website and select a database management system**

The purpose of developing a mock layout of the website is to generate a visual representation of the deliverable to present to potential website users for feedback. The team will use the list of most pertinent features to pick a website development platform that best suits the given criteria. After selecting the platform, the team will create a mock layout of the website using Canva because it is a free open-source tool. The team will also select a corresponding database management tool depending on the compatibility with the development tool.

### **3.2.1 Selecting an appropriate platform for website development**

Prior to creating the mock layout for the website, it is important to select the best tool for website development. The team's collaborator, Mr. Dragomir, has outlined expectations for the website which include the following:

1. Language Options – The website has to allow for the website to switch between English and Romanian.
2. Interactivity – Users should be able to interact with each other through commenting on posts.

3. Filtering Options – User stories can be filtered and searched by key terms in the article.

The team will use Mr. Dragomir’s expectations as criteria for conducting the analysis for three different website development platforms, WordPress, Wix, and Joomla. The team will conduct this analysis prior to selecting the most effective website development tool. We will complete this process during the remote period of the project so that we are prepared to start creating layouts on time.

### **3.2.2 Selecting a Database Management System**

Alongside the selection of the development tool, the team will need a database to store and retrieve user uploaded data. The team will complete this by connecting a database management system to the frontend. A database management system will provide Mioritics Association with an administrative account to access, approve, and retrieve all data.

The evaluation of which database management system will be based on two major criteria.

1. Skills required to implement database system
2. Cost of database development system

Due to time constraints and the various skill levels of our team, we need to take into account the complexity of implementing the database system. This along with the cost of the system itself will guide us into what exact platform we will use.

### **3.2.3 Conducting Cost Analysis**

Once the evaluation of the database systems is complete, the team will conduct a full-length cost analysis for the admin account for the website, the domain name, and long-term upkeep. Depending on the list of selected features, we may require a premium account on the development platform. The team will present the cost of a premium account and database management system to the collaborator for approval.

At this stage, the team will not purchase anything but will provide Mioritics with a set of recommendations detailing the potential long-term cost of producing the website to decide whether the selected tools are appropriate and within budget. If need be, the team will reevaluate the selected development tool and database management system. After the selection of the development tool, we will utilize the information gathered to complete background tasks such as determining cost of website development and domain name purchasing to present to our collaborator.

### **3.2.4 Creating a Mock Layout**

The team will create mock layouts using Canva dependent on a list of selected features provided earlier from the collaborator. After we create the mockup, we will present it to the Mioritics team, interviewees, and our advisors to obtain feedback.

### **3.2.5 Limitations**

One of the main limitations for achieving this objective is the time constraint for the project. Since the team is depending on input from our collaborator and for us to conduct case studies to generate an important list of features, we need to develop mockups in a timely manner.

By completing the general website layouts earlier, we will have sufficient time to get feedback from our collaborator and advisors.

### **3.3 Obtain feedback on mock layouts and website design**

The purpose of obtaining feedback on the mock layout of the website is to understand what the audience desires in the appearance of a website. It is important to know what the users like and dislike before actually finalizing the website. The group will gather feedback through review from collaborators and advisors and then survey responses.

#### **3.3.1 Present Mockup to Collaborator and Advisors**

The team will present the mockup to Mihai Dragomir and the project advisors to get feedback on overall layout and proposed sections. At this stage the mockup will contain the overview of sections and tabs for the website but will not have actual information on the pages. The team will take the feedback from Mihai and the advisors into consideration when producing the final working website.

#### **3.3.2 Surveys**

To begin this process the team plans to create survey questions using Qualtrics. The questions will be focusing on the aesthetics and features on the website, not the functionality. The questions are in Appendix B. The survey will be emailed to students at the University of Bucharest, with aims to get a sample size of 100. The team will also email the survey to a U.S. Romanian culture group with aims of a sample size of 100. After the respondents have answered the surveys the team will analyze the responses and determine which of the features on the website will go into the final design.

### **3.3.3 Limitations**

Some of the limitations of surveys are the response rate. Potential limitations for the survey questions are unanswered questions, differences in understanding or interpretation, and response error. The respondent could potentially misinterpret a question and incorrectly answer it. The respondent could also answer a question incorrectly if they rushed through the survey. To prevent this the team will list guidelines on the survey to get the most accurate responses.

## **3.4 Developing the Prototype Website**

Our final objective is to refine the website's layout and to develop a final website. The team will do the majority of this work by using a website creation platform decided through the completion of objective two. Using the information gathered from interviewing the people of Rasnov, feedback from our collaborator and advisor, along with data collected in surveys, we will add the most pertinent features and aspects of the website first. We will also determine layout and style through the feedback given through our various data collection methods.

### **3.4.1 Finalizing Preliminary Website Features and Domain**

To finalize the website design and features, the team will continue by purchasing a domain name and creating an account on the previously selected development tool. Due to the nature of the website the team anticipates we will need a premium account, and the cost analysis conducted will indicate the best way to proceed with development. The team will then have to connect the backend of the selected development tool to the database management system, to allow the admin (Mioritics Association) to add to the database and website. Additionally, the team will implement the advice received on the previous feedback methods to adjust visual

elements and layouts. As time permits, The team will present the completed website with fully developed functions to Mioritics for their approval.

In addition, the team will also look ahead to see what other aspects we could add if time allows or if other IQP groups were to continue the project in the future. This will be very dependent on the results of our interviews and surveys, as that will triage key features and design aspects for the website itself.

### **3.4.2 Limitations**

Another constraint will be the cost of the website. Although Mioritics Association has agreed to pay for the domain name, it is likely that the team will require a premium version of the platform to achieve the expected results for the website. We will be discussing the capabilities of the premium version with our collaborator to determine what the most efficient approach is.

# RASNOV TEAM PROJECT TIMELINE

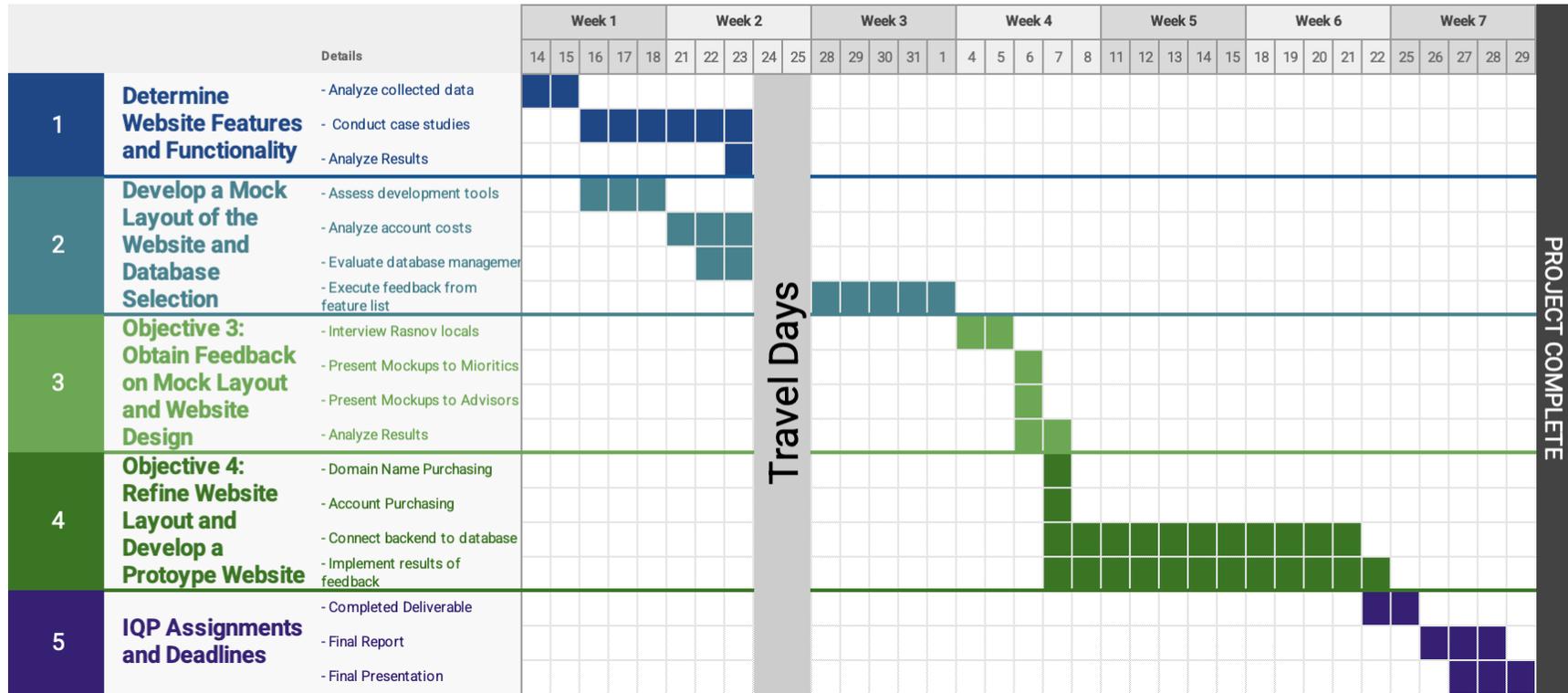


Figure 3.2 Gantt chart of project

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# Appendices

## Appendix A: Survey of Romanian Culture Groups

### Survey Questions

A1. What is your age?

- a. < 16
- b. 16 - 21
- c. 22 - 35
- d. 36 - 45
- e. 46 - 55
- f. 56 - 65
- g. > 65

A2. Where do you currently live?

A3. Which region of Romania are you from?

- a. Transylvania
- b. Wallachia
- c. Moldova
- d. Not Applicable

A4. Are you from Rasnov?

- a. Yes
- b. No

The following answers will be ranked on a scale of 1-5, with 1 being strongly disagree and 5 being strongly agree.

A5. How willing would you be to share personal stories, photos, or artifacts on a proposed website that would allow you to share your history?

A6. Would a mission and vision statement for the Mioritics Association be helpful on the website?

A7. Will a background information/home page be useful?

A8. Rules and guidelines for uploading would be useful?

A9. A current events page would be useful?

A10. Would a Rasnov history page be useful?

A11. How likely would you be to comment on other's posts?

A12. If a website like this existed for your current town, would it foster a stronger connection to the targeted area?

A13. Select what uploading information that you would want the website to provide?

- a. Blog/text
- b. Photos
- c. Audio files
- d. Videos
- e. Other \_\_\_\_\_

A14. How would you want stories to be formatted

- a. By post- all articles and stories will be found together
- b. By profile - one person can post multiple articles sorted under their names
- c. By region - pictures and stories will be grouped by geographic area

## **Appendix B: Survey for website mockup feedback**

### **Survey Questions**

- B1. What is most aesthetically pleasing about the website design mockup?
- B2. Which colors of the website mockup design do you like?
- B3. How are the images helpful in the website mockup design?
- B4. Did you find that GIS map was helpful?
- B5. Do you think you could use the website on your smartphone based on the mockup?
- B6. On a scale of 1-5 how easy is the website mockup to read? (5 being very easy)
- B7. On a scale of 1-5 how do you rate the conciseness of the content? (5 being concise)
- B8. On a scale of 1-5 how do you rate the clarity of the content on the mockup? (5 being very clear)
- B9. What is one thing you disliked about the mockup design?
- B10. What is one thing you liked about the mockup design?
- B11. Do you have any other suggestions regarding the website mockup design?

## **Appendix C: Preamble and Consent for Surveys**

### **Preamble and Consent For In Person Interviews**

#### Introduction

We are students from Worcester Polytechnic Institute (WPI), an engineering and science university in Worcester, Massachusetts in the U.S.A. We are conducting research alongside the Miorities Association to find information regarding your opinion on website features for a platform to help preserve the history of Rasnov. We plan to develop a website that will provide current and former residents of Rasnov with a platform to share their stories and connect with one another.

#### Confidentiality Statement:

We want to reiterate that we fully respect your desire for confidentiality. Records of your participation in this study will be held confidential so far as permitted by law. However, the study investigators, the sponsor or it's designee and, under certain circumstances, the Worcester Polytechnic Institute Institutional Review Board (WPI IRB) will be able to inspect and have access to confidential data that identify you by name. Only the investigators will have access to the interview recordings, and they will be transcribed and coded for common themes. Records of your participation in this study will be held confidential and any publication or presentation of the data will not identify you. You may decide to stop participating in the research at any time without penalty or loss of other benefits. Any publication or presentation of the data will not identify you. Subsequent to completing our work, we will be happy to share our findings with you for approval before we submit our project.