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**COS40045 Data Visualisation**

**Data Visualisation Project Process Book**

**(Title immigration……)**

**Date:** *Semester 1 2023*

**Tutorial Time:** *Monday 10:30 am*

**Group: TU1\_G02**

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**Link:** (mercury)

Word Count

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Introduction

1.1 Background and Motivation

The project’s broad topic was global migration, two thirds of all international migration is hosted by 20 countries around the world. Of the 20 main destinations for migrants seven were in Europe, Germany being the second largest host for migrants as of 2019 hosting about 13 million. Europe has had high rates of migrants over the past 20 years and for this project, we wanted to focus on Europe specifically looking at why Europe is in this position.

The audience that will be aimed at for this project will be students in both school and tertiary studies to give them easy access to a visualisation for their own report. This is important as our visualisation will allow for complex ideas and questions to be answered in a simple way for those that are beginning to look into a topic to understand. This is why aiming our audience at students is ok as our visualisation will allow for complex ideas to be expressed quickly and accurately.

1.2 Visualisation Purpose

The purpose of these visualisations is to

The first question that our visualisation will be able to answer is very simply which European countries have the highest migration rates.

1.3: Project Schedule

| **WEEK** | **Tasks** | **Who** | **Completed** |
| --- | --- | --- | --- |
| **Week 1** | Create Shared spaces, discord, GitHub, google drive | Luca | Y |
| **Week 2** | Find data sets.  Develop project schedule | Both | Y |
| **Week 3** | Begin process book,  Develop Questions from data set | Both | Y |
| **Week 4** | Project Stand-up 1 | Both | Y |
| **Week 5** | Data Clean up | Oliver | Y |
| **Week 6** | Design Data Visualisations | Oliver | Y |
| **Week 7** | HTML Code | Luca | Y |
| **Week 8** | CSS Code | Luca | Y |
| **Week 9** | JavaScripting code | Both |  |
| **Week 10** | JavaScripting code,  Project Stand-up 2(data and design) |  |  |
| **Week 11** | Project Stand-up 3 (data, design, programming) |  |  |
| **Week 12** | Project Stand-up 4 (demonstration) |  |  |
| **Week 13** | Final Submission (4th June) |  |  |
| **Week 14** | Individual Reflection (7th June) |  |  |

Data

2.1 Data Source

The data sourced from Eurostat which is a statistical office of the European Union Their goal is to provide high quality statistics and data on Europe. They have partnerships with National Statistical Institutes and other national authorities in the EU. They have a policy of encouraging re-use of their data for both non-commercial and commercial purposes provided the source is indicated as Eurostat and if any modification to data is done it must be clear to the end user.

2.2 Data Processing

Requirements

3.1 Must-Have Features

3.1.1 Must-Have Features for Visualisation

1. Title: The visualisations must have a descriptive title that tells the audience what they are looking at quickly and accurately.
2. Axes and Scales: Axes are clearly defined and the scale for these axis’s is consistent this is done to ensure our graphical integrity is at a high level as our aim is to represent accurate information.
3. Legend: Legends are extremely helpful as it allows for the audience to understand what features in the visualisations represent
4. Colour: Colour will be used to show differences between data sets and features we are wanting to highlight.
5. Captions: All visualisations will have an explanation attached to them giving further context about what is being seen above.
6. Interactivity: We want our visualisations to have interactivity such as mouse over to give extra information.

3.1.2 Must-Have Features for Website

1. The website must be accessible via a web page.
2. Must have descriptive heading.
3. Must have brief information about what is being shown in the visualisations to give the audience context to what they are seeing.

3.2 Optional Features

1. All code is compartmentalised into different files, (html, css, js) all in separate files.
2. Buttons: Will allow the audience to change the visualisations in predefined ways to help highlight a feature that answers our questions.
3. Drop Down Box: A drop down box would allow a user to hyper-focus on a country they wish.

Visualisation Design

Validation

Conclusion

References