Project Plan
New York Restaurant Inspection

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Table of Contents

1.0 Introduction

1.1 Background

Food safety has always been a top priority topic to discuss amongst hospitality industries that we should not overlook. Therefore, this team has decided to conduct a project on the New York Restaurant Inspection dataset. This dataset is worth studying and analysing because it illustrates restaurant inspections for permitted food establishments in NYC (New York City). Based on this dataset, this team is encouraged and instructed to build an Analytical Application that could visualise and predict restaurant closings and trends by retrieving all inspection details, plotting the distribution of violations over the different suburbs, retrieving all violations from user input, and analysing the cases related to animal, for example, rats, mice, or others.

1.2 Scope

The scope and constraints of this project are to build an analytical application using Python programming language, apparently version 3^{+}. However, there is no limit to cross platforms or remote access using Telnet. This suggests that the objective of this project is to build an application that works on the local machine, such as PC or laptops, by utilising the advancement of the Python programming language. This team decided to make use of the following working environment for this project which also means that the user also needs the same environment to run this application seamlessly:

- Operating System: Mac Bigsur
- Programming Language: Python version 3.9
- Python Package Library: Tkinter, Pandas, Matplotlib, sqlite3, PIL, datetime, time, os, json
- Integrated Development Environment (IDE): Pycharm

The deliverable of this project includes visualising the metadata from the dataset of New York restaurant inspection results and make it convenient for users to understand the trends and violation types of restaurants through graphic user interface (graphs and charts). This means that users can open any dataset which has CSV format; then generate reports, graphs, or charts with just a few clicks on their computing device's UI. These reports, graphs, or chats can be filtered by date, violation types, address, name, grade, score, and more.

1.3 Document contents

This document will contain a Work Breakdown Structure (WBS) which break down the big picture of this project into smaller chunks of works that could be done simultaneously by each member of this team. This makes the project more manageable and leads to better team productivities. Activity Definition and Estimation is also illustrated in this document as well since it determines the milestones and estimated deadline required to complete all the activities that are mentioned in WBS. The last property of this document is Gantt Chart. It is believed that Gantt Chart is a visual version of Activity Definition and Estimation because it shows bar charts that offer a visual view of different activities at the specific milestone.

2.0 Work Breakdown Structure

This section includes the Work Breakdown Structure (WBS) for the whole project. This WBS considers all project activities that are needed to be done before and after closing this project.

For the assignment part b, this team has made a little change to the Testing Plan in step 4 of the project lifecycle to meet the assignment requirements. This team made the following changes:

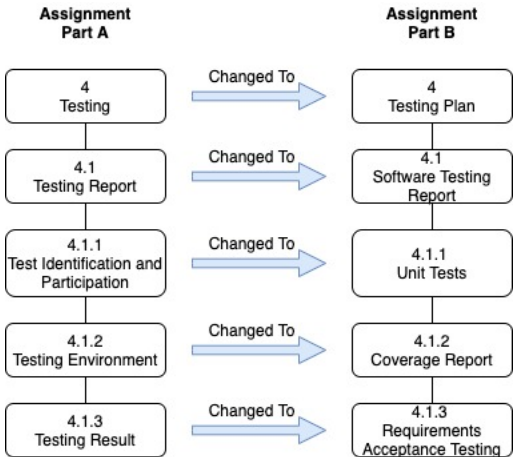
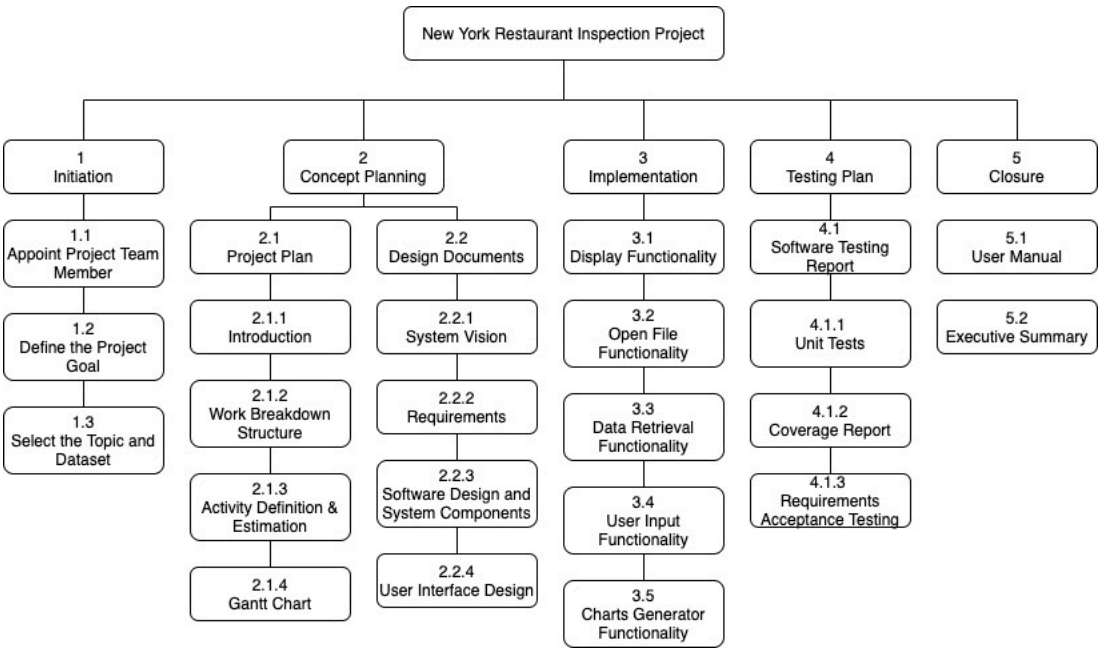


Figure 1: Work Breakdown Structure for New York Restaurant Inspection Project



3.0 Activity Definition & Estimation

The following table illustrates all the activities and estimated durations for this project.

ID	Activity Name	Estimated Duration	Description
1	Initiation		
1.1	Appoint project team member	1 day	Find a good partner to work with
1.2	Define the project goal	1 day	Team members study the objective of this project for two hours
1.3	Select the topic and dataset	1 day	Carefully select one of the datasets and start working on it
2	Concept Planning		
2.1	Project Plan		
2.1.1	Introduction	1 day	Write an overview about project's background, scope, and contents of the document
2.1.2	Work Breakdown Structure	1 day	Design graphs and visualise required activities to complete this project
2.1.3	Activity Definition & Estimation	1 day	Estimate the times needed to complete each activity in WBS
2.1.4	Gantt Chart	1 day	Represent Activity Definition & Estimation in Gantt Chart
2.2	Design Documents		
2.2.1	System Vision	2 days	Give a broad overview on problem background, system overview, and potential benefits of the new system
2.2.2	Requirements	3 days	Give a detail view on user requirements, software requirements, and use cases
2.2.3	Software Design and System Components	2 days	Work on software design and system components,
2.2.4	User Interface Design	2 days	Design user interface: this includes structural design, visual design
3	Implementation		
3.1	Display Functionality	7 days	Design a window to lay buttons, labels, charts, and views
3.2	Open File Functionality	1 day	Users can open any CSV format file with open button
3.3	Data Retrieval Functionality	7 days	Allow users to retrieve data by date
3.4	User input Functionality	1 day	Allow users to input keyword and search
3.5	Chart Generator Functionality	3 days	Allow users to generate chart
4	Testing Plan		
4.1	Software Testing Report		
4.1.1	Unit Testing	2 days	20 to 30 unit-test will be conducted
4.1.2	Coverage Report	1 day	This section describes the results of coverage testing.
4.1.3	Requirements Acceptance Testing	1 days	This section describes whether the required functions are fully or partially implemented
5.	Closure		
5.1	User Manual	2 days	Explain how to use the application and show its features

5.2	Executive Summary	3 days	Prepare a report that analyses the data over a 12-month period and presents the results in this executive summary

4.0 Gantt Chart

Figure 2: Gantt Chart for New York Restaurant Inspection Project