Project Plan

7810ICT-2022-Assignment-Liangxian-Rafael

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# Introduction

## Background

In this day and age, data is very important resource. A lot of information, including crucial and important ones, can be taken from data. But extracting the information, which we can accumulate to form knowledge, from raw data is not an easy task. The amount of data to process in order to get a bit of information can be daunting and too much to handle for the normal human being. Thankfully, we have now have the help and power of computers to aid us in processing these data. This project aims to help users gather more meaningful information from data through analysation and visualisation through the creation of a simple software tool. Specifically, the tool will be specifically catered to process "NYC Restaurant Inspections" data. From the analysation and visualisation of this dataset, it is hoped that users may gather and accumulate various information, and eventually knowledge, from the simple dataset of restaurant details and their inspection violations.

## Scope

* In Scope
* This tool specializes in analysing and visualising the "NYC Restaurant Inspections" dataset
* Features are:
* Retrieve relevant inspection details within a user-selected period;
* Plot the distribution of violations over the different suburbs within a user-selected period;
* Retrieve all violations that contain a keyword (user entered) within a user-selected period;
* Analyse the cases related to animals, e.g., rats, mice or others, and their trend over time and distribution over suburbs;
* Retrieve relevant inspection details within a user-selected borough and cuisine description;
* Out of Scope
* Compatible to analyse other datasets
* Customizing interface design (colour, shape, etc) of initial and results page by the user

## Document contents

This document contains the introduction to the project which includes the background and history of the project and its scope, a work breakdown structure, activity definition and estimation and a Gantt chart based on the aforementioned work breakdown structure.

# Work Breakdown Structure

Table 1 demonstrate Work Breakdown structure briefly for this software project. We estimate work time of 10 weeks and 3-5 hours per day. It is estimated that a total of around 355 hours will be necessary to finish the building of the system and any future delivery. With a group size of two people, we plan to finalize this project before the 12 of October in this year, based on the action date on the 1th of August in 2022.

|  |  |  |
| --- | --- | --- |
| **Work Break Down Structure:**  **Part A** | | |
| **Task ID** | **Task Description** | **Effort (Days)** |
| **1.0** | **Concept and Planning** | **2** |
| **1.1** | **Evaluate Project Instruction and Guidelines** | 2 |
| **1.2** | **Develop Project Plan** | **2** |
| 1.2.1 | Define Project Background | 2 |
| 1.2.2 | Define Project Scope | 2 |
| 1.2.3 | Define Work Breakdown Structure | 3 |
| 1.2.4 | Activity Definition and Estimation | 2 |
| 1.2.5 | Develop Gantt Chart | 3 |
| **1.3** | **Divide Member’s Task** | **1** |
| **2.0** | **Software Design** | **3** |
| **2.1** | **Develop System Vision** | **2** |
| **2.2** | **Define Requirement** | **2** |
| 2.2.1 | Define User Requirements | 2 |
| 2.2.2 | Define Software Requirements | 2 |
| **2.3** | **Develop Use Case** | **5** |
| **2.4** | **Define System Components** | **3** |
| **2.5** | **Design User Interface** | **2** |
| **2.6** | **Project Part A Submission** | **1** |
| **3.0** | **Software Implement** | 7 |
| **4.0** | **Software Testing** | **7** |
| 4.1 | Unit Testing | 7 |
| 4.2 | Requirement Acceptance Testing | 4 |
| 5.0 | Software Development | 7 |
| 6.0 | Final Project Submission | **1** |

***Table 1: Work Breakdown Structure***

# Activity Definition & Estimation

|  |  |  |  |
| --- | --- | --- | --- |
| **Activities** | **Definition** | | **Estimation** |
| 1.0 Concept and Planning | This project is designed software analysis tool, operating on Python, SQlite environment | | 2days |
| 1.1 Evaluate Project Instruction and Guidelines | Understand client’s requirement regarding on:   * Distribution of violations over the different suburbs inspection details * All violations that key words enter searching * Inspection details * Animal control inspection * Local cuisine inspection | | 3days |
| 1.2 Develop Project Plan | The designed project plan specific satisfy users’ expectation by restaurant rating | | 2days |
| 1.2.1 Define Project Background | The offered information pertains to restaurant inspections at licenced food businesses in New York City. Inspectors from the Department of Health assess restaurants on a scale from A to F. | | 2days |
| 1.2.2 Define Project Scope | In scope:   * Data visualization by different format * Easy to illustrate restaurant inspection data by entering key words * Processing data by certain time of period * Examine the pattern of animal-related incidents over time and across different neighbourhoods. * Summarize the number of infractions committed in each suburb within the time period specified by the user   Out of scope:   * Compatible to analyse other datasets * Support for another department rather than Healthy Department | | 4days |
| 1.2.3 Define Work Breakdown Structure | This software project result-oriented work breakdown structure focus on project design, project management, analysis, designing, developing, and testing stages. | | 3days |
| 1.2.4 Activity Definition and Estimation | Defining the activities in the work breakdown structure and estimating duration needed to complete each activity | | 3days |
| 1.2.5 Develop Gantt Chart | Creating a Gantt chart based on the work break down structure and activity definition and estimation | | 5days |
| 1.3 Divide Member Tasks | Divide tasks among team members (Liangxian Zhao and Rafael Alexander) | | 1day |
| 1. Software Design | The component of software design are listed:   * User opens app * User chooses function * (If needed) User enters time period/keyword/etc * App displays analyzation and visualization of “NYC Restaurant Inspection” dataset with chosen function and customization by user * User chooses to close app or to do another session | | 3days |
| 2.1 Develop System Vision | Its goal is to help the client in decision making of a development project by giving them an understanding of the problem and the proposed solution. | | 2days |
| 2.2 Define Requirements | Software requirements a document that outlines the functions that the programme will be required to fulfil and how it will carry out those functions. Additionally, it outlines the functionality that the product satisfy the stakeholders. | | 2days |
| 2.2.1 Define User Requirements | Is a standard tool lists function and features that meet requirement of end-user | | 2days |
| 2.2.2 Define Software Requirements | A requirement is a condition or capacity that the programme or system component must possess in order to address a problem that exists in the actual world. The issues may include automating some aspect of a system, improving an existing system, regulating a gadget, etc. | | 2days |
| 2.3 Develop Use Cases | A use case is a scenario that illustrates how a user might use a certain feature of a product or service. The use case might define the optimal and worst-case possibilities, as well as any important outliers. With the a use case model tool, a use case may be written down or turned into a graphic. | | 5days |
| 2.4 Define System Components | A system component is a procedure, application, or utility on a computer, as well as any other component of the operating system of a computer, that assists in the management of various sections of the computer. | | 3days |
| 2.5 Design User Interface | | Concepts from information architecture, graphic design, and interaction design are brought together under the UI umbrella. Interface provides features that are simple to access, understand, and utilise to assist those tasks. | 2days |
| 2.6 Project Part A Submission | | Submit Part A of the Assignment | 1day |
| 3.0 Software Implementation | | Based on the scope of the firm and the nature of the new tool or programme, introducing it might be a challenging endeavour. It is often used to describe the steps necessary to incorporate a new software programme into an existing company system. | 10days |
| 4.0 Software Testing | | Testing implemented software | 7days |
| 4.1 Unit Testing | | Test each unit of the software | 7days |
| 4.2 Requirement Acceptance Testing | | The major goal of this test is to determine whether or not the system is ready to be released to end customers by determining whether or not it complies with the business requirements. | 4days |
| 5.0 Software Deployment | | The components of designing, documenting, developing, and testing a software product, as well as continuing maintenance on the software, is referred to as software development. | 7days |
| 6.0 Final Project Submission | | Submit Part B of Assignment B | 1day |

***Table 2 Activities definition& Estimate***

# 4.0 Gantt Chart

Figure 1 illustrate the estimated work breakdown structure as visualized Gantt chart. The task duration and work date are designed for project schedule arrangement. The Gantt chart document can be attached on Gitlog.

Chart

Description automatically generated

***Figure 1. Gantt chart***