

2017

PROJECT SPECIFICATION [3 DOCUMENTS]

PROBLEM SPECIFICATION SOFTWARE SPECIFICATION AND
PROJECT MANAGING SCHEDULE
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1.PROJECT MANAGING SCHEDULE

The project was given on 19th October and I started this project on 22nd October since I had some other submission. The target was to complete the project in one week prior so that I have enough time for documentation and buffer time if I face any problem while coding.

In the below table, I have listed the date when the tasks started and total number of days taken to complete the task. In the Task plan column, I have listed the task planned and total number of hours dedicated per day to complete it. In the comments column, I updated if the task was completed on time or the extra days taken to complete it.

This project managing schedule helped me to stick to my tasks and not procrastinate till the end. It was a checklist and made me feel so organized. I will follow this managing schedule henceforth for my future projects.

SCHEDULE TABLE:

DATE	DAYS TAKEN	TASK PLAN	COMMENTS
22.10.2017	2	UNDERSTAND THE PROJECT PROBLEM AND REQUIREMENTS. AROUND 3 HOURS PER DAY.	COMPLETED ON TIME
25.10.2017	1	MEET TA TO CLARIFY THE QUESTIONS	COMPLETED ON TIME
26.10.2017	4	DESIGN THE PROJECT – HIGH AND LEVEL IMPLEMENTATION ALONG WITH SOFTWARE SPECIFICATION. AROUND 4 HOURS PER DAY.	COMPLETED ON TIME
31.10.2017	6	CODING THE ENTIRE PROJECT - AROUND 3 HOURS PER DAY.	TOOK 8 DAYS. TWO EXTRA

10.11.2017	3	TESTING AND CREATING A TESTING DOCUMENTATION. AROUND 2 HOURS PER DAY.	COMPLETED ON TIME
14.11.2017	3	DOCUMENTATION AND COMPLETE TESTING. AROUND 4 HOURS PER DAY.	COMPLETED ON TIME
19.11.2017	1	SUBMIT THE PROJECT BEFORE 11PM.	COMPLETED ON TIME

2. PROBLEM SPECIFICATIONS

The problems we foresee is

- The coupons will be scattered and there is no collection of coupons in one common place.
- The provision of adding the coupons directly from one input file may not be available.
- The provision to search for any desired coupon may not be available.
- The provision to list the coupons in the ascending order may not be available.
- The provision to list the coupons based on the user's choice may not be available.
- The provision to know the search count when a coupon is searched may not be provided.
- The provision to know the search count explicitly in binary and linear search may not be provided.

All the listed problems can be solved by designing a Coupon Inventory System where you can add the coupons manually or through a file. The coupons can be searched easily and we can get to know the search count of the binary and linear search. The coupons can be listed in the ascending order and most importantly it will be listed in the order based on the user's choice.

3. SOFTWARE SPECIFICATION

The functions implemented in this project are:

1. Purchase Coupon

User can select the modes to input the coupons either manually or through an input file. If the user selects manual, then he/she can type the parameters of the coupon and it will be added to the array based linked list. If the user selects file, then the path of the file needs to be entered and all the coupons data inside the file will be added to the array based linked list.

2. Search coupon(s)

User can search a coupon (or coupons) of a product. User can type the product name or coupon provider name and from this user entry, the entire array based linked list will be searched for this coupon. It will be displayed if it was found, else "NO COUPON FOUND" message will be displayed.

The search will be done with two ways – linear search and binary search. And for the binary search, the linked list is first sorted and then binary search is performed. When both the search is performed, it displays the search count needed to find the coupon. And we notice that binary search is faster.

3. List coupons

User will input any parameter type of the Coupon [Coupon provider name, Product name, price, discount, coupon status and expiration days]. The list in the ascending order of the coupons based on the parameter selected by the user is displayed to the user.

4. Exiting the program