**Requirements specifications**

**<**Train station system **>**

<Observation technique>

25/11/2019

We used observation technique as it used to understand operational processes and help derive requirements for software to support these processes, and t it reflect the actual ways that people work .

We talked to Madame Hana Salah, we saw the web application which is already used , and took the available information about the desktop application

So we made this requirement according to these observations

* **Introduction:**

The following section provides a version the software requirement specifications (SRS) for the train station.

* purpose

The purpose of software requirement specifications (SRS) is to determine both function and nonfunctional requirements of train station also the document provides as overall description about the train station system with UML analysis model

* scope

The train station system is a software which help to make the process of reservation and cancellation of ticket an easy task, ordered and organize, it help inquire about the schedule of trains, and it help to calculate the total profit for all employee's shift.

* Actors

*Software Admin*: someone who is responsible for maintain update and checking error of the software.

*Reservation Employee*: someone who use the system to help customer to reserve or cancel the ticket.

* **Over all Description:**
* product description

The software description in this software requirement is train station system this system merges versions hardware and software elements.

* product functions

1. Login 4. Inquire.
2. Reservation 5. Total profit.
3. Cancelation

* user classes and characteristics

1. Reservation employee will be able to Reserve, cancel a ticket, get total profit of the shift and inquiry about train schedules.

2-system admin will be responsible for maintaining, updating and checking errors for the software.

* design and implementation

-Programing language is c#.

- Operating system is windows.

* Assumption and dependences

It will always be used on desktop computer or laptop so all the actor included in the software should be aware of the computer and English language***.***

* Hardware:

-Processor Core 2

-HDD 80 GB

- RAM 512 MB

* Software:

- Windows 7, 10

-Visual studio 2015,2019

* **Functions value:**
* Calculating train’s speed

We will not provide it because if the train is late one of the employees will call another station on its path and the station will tell the employee where it is.

* Reservation

We will provide a guarantee for a place to travel on the train.

* Cancelation

We will provide it to guarantee that there is a passenger does not need his ticket.

* Total profit

We will provide to guarantee the efficiency of the employee and the money gained by the system.

* **System features:**
* Functional requirements
* Reservation [R]

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| --- | --- |
| Requirement ID | Requirement Description |
| 1.R | The system must allow “employee” to add places “from/to”, and data of the train that customer w |
| 2.R | Check on the seat.  **2.1** There is no an available seat the system output message that “there is no an available seat".  **2.2** There is an available seat the system must reduce number of seats by number of tickets that customer wants and calculate Price. |
| 3.R | The system must output a massage that “Reservation is successful”. |
| 4.R | The system must provide an output report with the ticket’s ID, train’s number , seat’s number, time ,and date |

* Canceling [C]

|  |  |
| --- | --- |
| Requirement ID | Requirement Description |
| 1.C | The system must allow "Employee" to enter the ID of tickets  That customer wants to cancel. |
| 2.C | The system must increase number of seats by the ID of tickets that customer wants to cancel and decrease profit. |
| 3.C | The system must output a massage that “canceling is done”. |

* Inquiry [I]

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| --- | --- |
| Requirement ID | Requirement Description |
| 1.I | The system must output a report with all appointments of the trains according to date of the day. |

* Total profit of the shift [TS]

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| --- | --- |
| Requirement ID | Requirement Description |
| 1.TS | The system must allow “Employee” to enter his ID . |
| 2.TS | The system must output a report that the employee which already using the system of reserved tickets and there total price made in his shift. |

* Nonfunctional requirements:
* performance requirements [PR]

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| --- | --- |
| Requirement ID | Requirement Description |
| 1.PR | The system must respond the business operation in less than 4sec for user. |
| 2.PR | The system should be reliable. |
| 3.PR | The system should response the operation message to the users within 2 sec. |

* Safety and security requirements [SS]

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| --- | --- |
| Requirement ID | Requirement Description |
| 1.SS | The system must handle safe login through session. |

* Reliability [R]

|  |  |
| --- | --- |
| Requirement ID | Requirement Description |
| 1.R | The system should be reliable and provide managing exceptions so that an unintended result doesn’t occur such as system crashes or data validation failures. |

**use \_case**

*Employee*