TERM PROJECT - MILESTONE 2

SENG2020 - SOFTWARE QUALITY

DATE OF SUBMISSION: 2021-11-11

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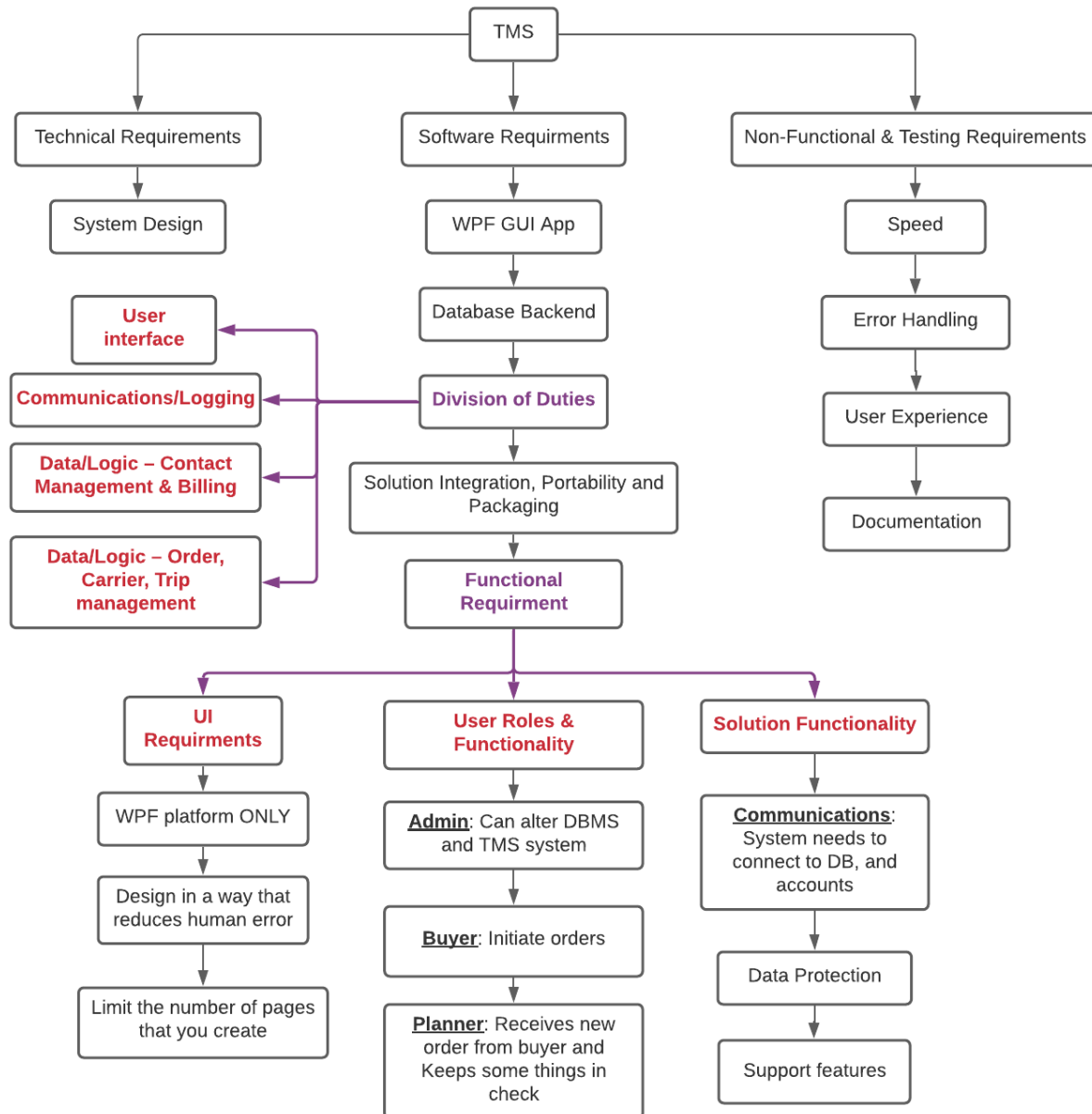
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CONTENTS

1 WORK BREAKDOWN STRUCTURE DIAGRAM + WBS DICTIONARY

1.1 WORK BREAKDOWN STRUCTURE DIAGRAM

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                                    TMS
        ┌────────────────────────────┼────────────────────────────┐
        ▼                            ▼                            ▼
 Technical Requirements      Software Requirments      Non-Functional & Testing Requirements
        │                            │                            │
        ▼                            ▼                            ▼
   System Design               WPF GUI App                     Speed
                                    │                            │
                                    ▼                            ▼
         User                  Database Backend            Error Handling
       interface  ◄──┐              │                            │
                     │              ▼                            ▼
 Communications/Logging ◄──── Division of Duties           User Experience
                     │              │                            │
 Data/Logic – Contact ◄──┘         ▼                            ▼
 Management & Billing        Solution Integration,         Documentation
                             Portability and
 Data/Logic – Order,  ◄──    Packaging
 Carrier, Trip                      │
 management                         ▼
                               Functional
                               Requirment
            ┌───────────────────────┼───────────────────────┐
            ▼                       ▼                       ▼
          UI                  User Roles &         Solution Functionality
      Requirments             Functionality
            │                       │                       │
            ▼                       ▼                       ▼
   WPF platform ONLY         Admin: Can alter DBMS     Communications:
            │                and TMS system            System needs to
            ▼                       │                  connect to DB, and
   Design in a way that             ▼                  accounts
   reduces human error      Buyer: Initiate orders           │
            │                       │                         ▼
            ▼                       ▼                   Data Protection
   Limit the number of pages  Planner: Receives new          │
   that you create            order from buyer and            ▼
                              Keeps some things in      Support features
                              check
```

1.2 WORK BREAKDOWN STRUCTURE DICTIONARY

Level	Task Number	Task Owner	Task Name	Description	Dependancy	Resources Needed	Start Date	Due Date
1	1		TMS	All components required to specify the design, creation, and tesing of the TMS.				
2	1.1	Mahmood Al-Zubaidi	Technical Requirements	TMS solution prototype which allows OSHT to manage the order creation, management and billing process for the company.	TMS Requirements Access	TMS Requirements	10/18/2021	10/22/2022
2	1.2	Briana Burton	Software Requirements	WPF GUI based Application using MySQL database.	TMS Requirements Access	TMS Requirements	10/18/2021	10/22/2021
2	1.3	Nawriz Ibrahim	Non-Functional & Testing Requirements	Desired characteristics for the TMS solution which are non-mandatory.	TMS Requirements Access	TMS Requirements	10/18/2021	10/22/2021
3	1.1.1	Sunraj Sharma	System Design	Mandatory TMS communication to database.	Software	Dev Team	11/03/2021	11/10/2021
3	1.2.1	Mahmood Al-Zubaidi	WPF GUI App	WPF GUI based application.	Software Design	WPF Application	11/03/2021	11/10/2021
3	1.3.1	Sunraj Sharma	Speed	TMS communication is efficient to and from.	Software Design	Unit Tests	11/03/2021	11/10/2021
4	1.2.1.1	Nawriz Ibrahim	Database Backend	Integration of mySQL database.	MySQL Design	MySQL	11/10/2021	11/17/2021
4	1.3.1.1	Briana Burton	Error Handling	The system should take steps to handle all errors without breaking execution of the program and avoid losing entered, validated data and/or transactions.	Software Testing	Unit Tests	11/10/2021	11/17/2021
5	1.2.1.1.1	Mahmood Al-Zubaidi	Division of Duties	Each team member to take lead in specific areas.	Communication Management	Communication Manager	11/10/2021	11/17/2021
5	1.3.1.1.1	Nawriz Ibrahim	User Experience	System provides smooth workflow that minimizes handling time and actions to enter data, provides reasonable number of steps to path through to any function in the solution, providing default or recommended and helps prevent human error by limiting free-form data entry when sensible to do so.	Software Design	UX Designer	11/10/2021	11/17/2021
6	1.2.1.1.1.1	Briana Burton	User Interface	UI should be intuitive to use	Interface Design	UI Designer	11/17/2021	11/24/2021
6	1.2.1.1.1.2	Nawriz Ibrahim	Communications/Logging	Ability to target IP address and ports for all DBMS communication.	Software Design	Database	11/17/2021	11/24/2021
6	1.2.1.1.1.3	Sunraj Sharma	Data/Logic - Contact Management & Billing	TMS solution to include logic to appropriatley handle billing and contact management.	Logic Implementation	Dev Team	11/17/2021	11/24/2021
6	1.2.1.1.1.4	Sunraj Sharma	Data/Logic - Order, Carrier, Trip Management	TMS splution to include logic to appropriately handle management of orders, carriers, and trips.	Logic Implementation	Dev Team	11/17/2021	11/24/2021
6	1.2.1.1.1.5	Mahmood Al-Zubaidi	Solution Integration, Portability and Packaging	TMS prototype be delivered and tested as a compiled, executable application. Prototype design solution should have the future changes in mind.	Prototype Design	Dev Team, Unit Tests	11/17/2021	11/24/2021
6	1.3.1.1.1.1	Briana Burton	Documentation	TMS prototype to be delivered fully documented and code commented.	Code Commentation	Dev Team	11/20/2021	11/24/2021
7	1.2.1.1.1.5.1	Nawriz Ibrahim	Functional Requirements	User Interface Requirements, user Roles and Related Functionality, and Solution Functionality Requirements.	Software Testing	Dev Team, TMS Requirements, Unit Tests	11/20/2021	11/30/2021

1.2 WORK BREAKDOWN STRUCTURE DICTIONARY CONT.

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1.2.1.1.1.5.1.1	Briana Burton	UI Requirements	UI should be intuitive, UI to be developed in WPF, minimize human error, and have workflow accomplished in few steps.	UI Design and Access to TMS Requirements	UI Designer, TMS Requirements	11/20/2021	11/30/2021
1.2.1.1.1.5.1.2	Sunraj Sharma	User Roles & Functionality	Specific functions realting to user roles: Admin, Buyer, and Planner.	Access to User Stories and System Testing	Dev Team, Unit Tests	11/20/2021	11/30/2021
1.2.1.1.1.5.1.3	Briana Burton	Solution Functionality	Solution must be able to connect to remotely hosted MySQL databases, access should be done through a named account and password, and The solution must generate log files.	System Design and System Testing	Dev Team, Unit Tests	11/20/2021	11/30/2021
1.2.1.1.1.5.1.1.1	Mahmood Al-Zubaidi	WPF Platform ONLY	Ensure that the application is created using WPF platform ONLY.	System Design	WPF Application	11/20/2021	11/30/2021
1.2.1.1.1.5.1.2.1	Nawriz Ibrahim	Admin	Can alter DBMS and TMS System.	Functionality of User Roles	Dev Team	11/24/2021	12/04/2021
1.2.1.1.1.5.1.3.1	Sunraj Sharma	Communications	Solution to connect to remotely hosted MySQL databases using specific named account and password.	Database Design and Testing	MySQL Database, Dev Team	11/24/2021	12/04/2021
1.2.1.1.1.5.1.1.1.1	Briana Burton	Human Error Reduction Design	Steps are to be taken to minimize the opportunity for human data entry errors.	Appropriate WPF Design and Testing	UI Designer, UX Designer	11/24/2021	12/04/2021
1.2.1.1.1.5.1.2.1.1	Sunraj Sharma	Buyer	Initiate orders.	Functionality of User Roles	Dev Team	11/24/2021	12/04/2021
1.2.1.1.1.5.1.3.1.1	Nawriz Ibrahim	Data Protection	Access to MySQL Databases to be done through a named account and password that is not Root-enabled.	Software Design	MySQL Database, Dev Team	11/24/2021	12/04/2021
1.2.1.1.1.5.1.1.1.1.1	Mahmood Al-Zubaidi	Page Limitation	Ensure that each role's function an be accomplished on 1 screen; Reduce amount of paging away to different 'screens' or the number of pop-up dialogue boxes.	Software Design and Testing	Dev Team	11/24/2021	12/04/2021
1.2.1.1.1.5.1.2.1.1.1	Briana Burton	Planner	Planner has the ability to recive new order from buyer and keep some things in check.	Functionality of User Roles	Dev Team	11/24/2021	12/04/2021
1.2.1.1.1.5.1.3.1.1.1	Mahmood Al-Zubaidi	Support Features	Solution must generate usable log files in the event of an issue within the code.	System Design and Feedback	Log Files	11/24/2021	12/04/2021

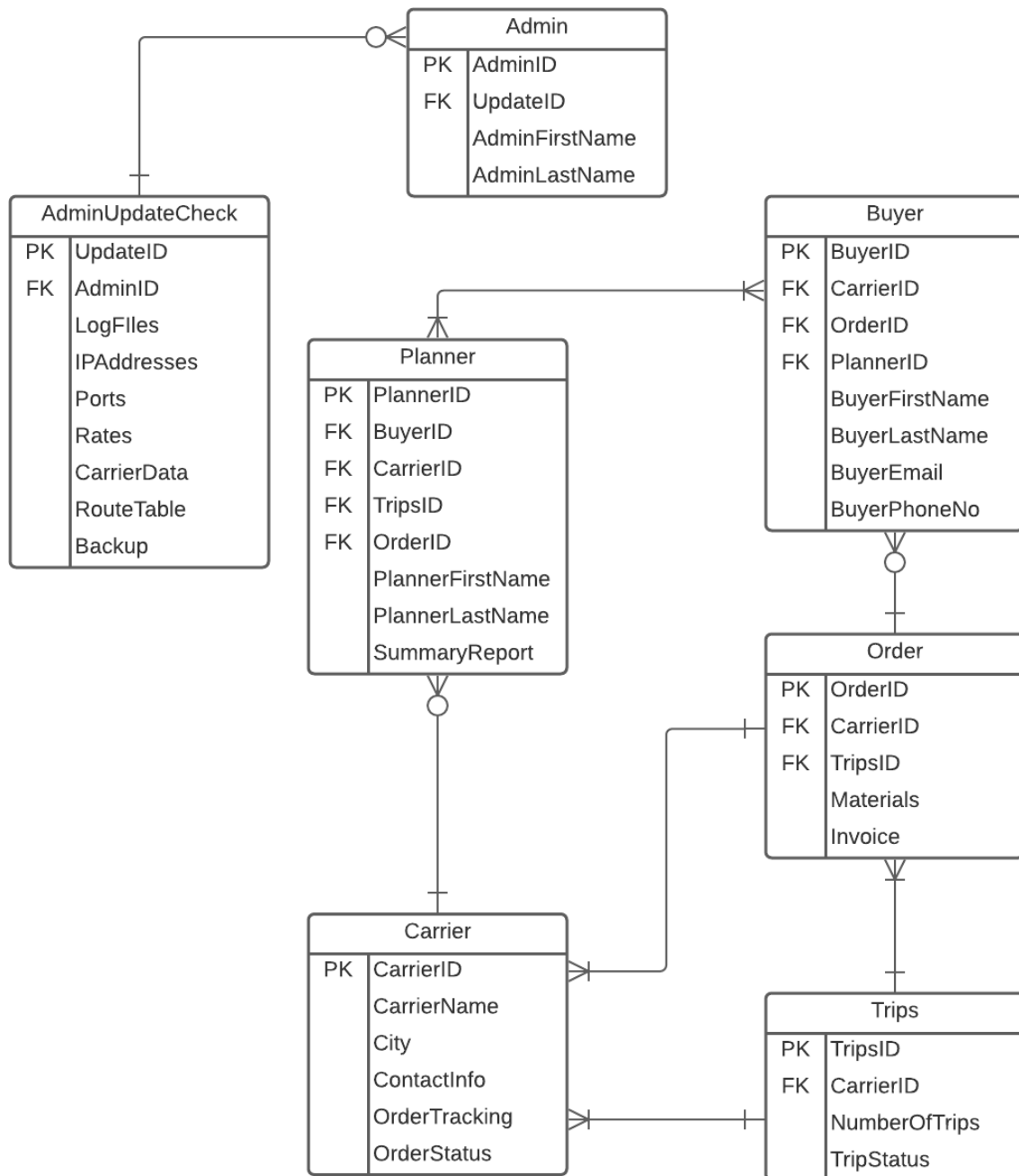# 2 SEQUENCE DIAGRAM FOR BUYER CREATES ORDER

LINK TO DIAGRAM
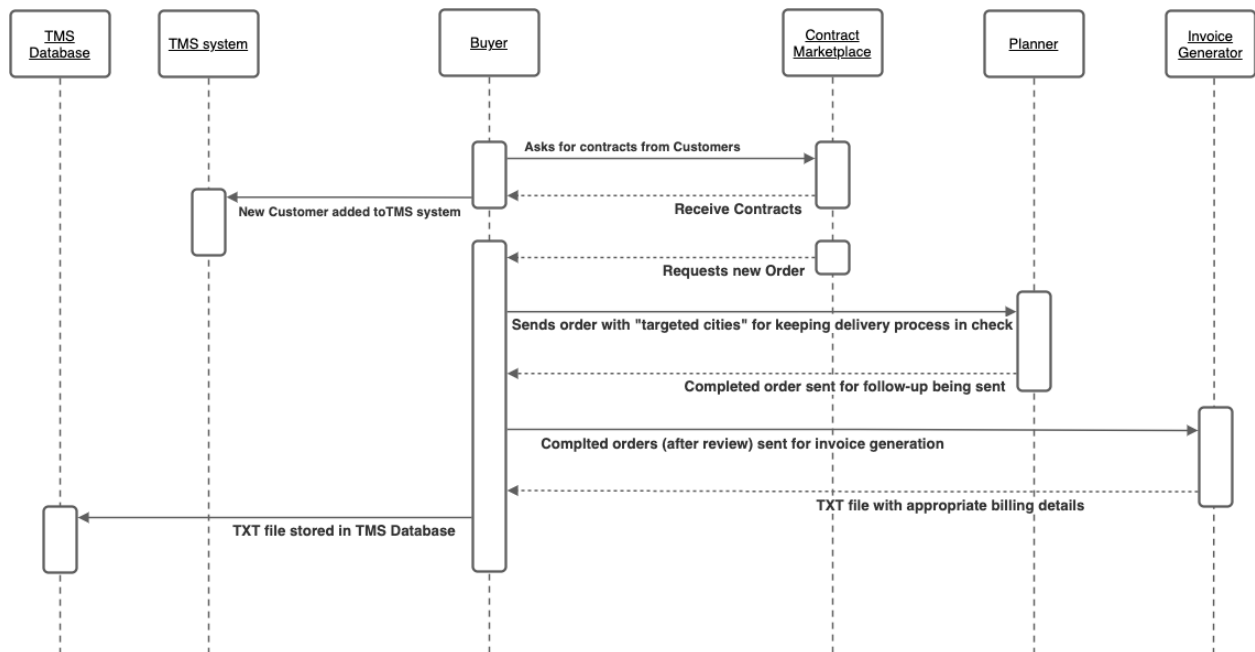
3 USE CASE DIAGRAM FOR THE PLANNER ROLE

LINK TO DIAGRAM
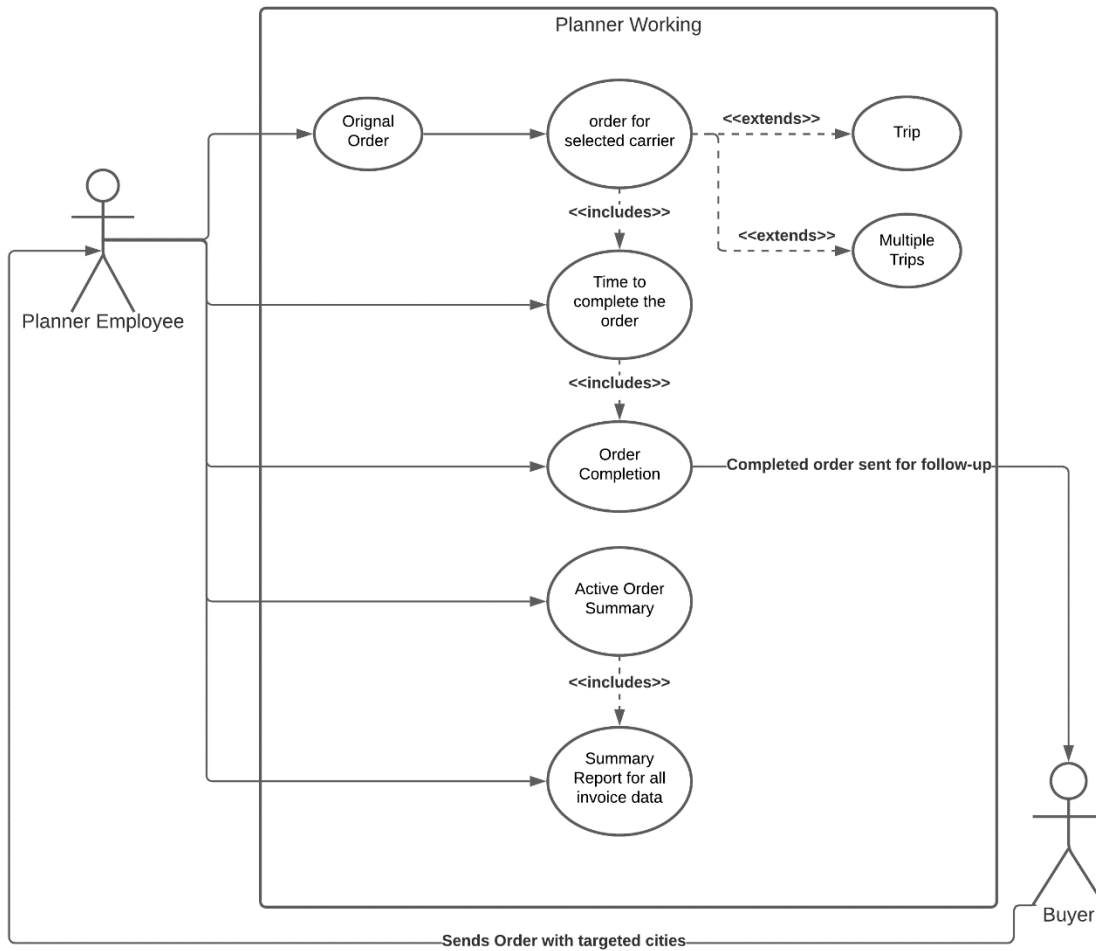
4 SCHEMA DIAGRAM FOR TMS SOLUTION'S DATABASE

LINK TO DIAGRAM

5 CLASS DIAGRAM FOR TMS SOLUTION