DESIGN DOCUMENT

SMART TODO LIST

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BATCH-2017

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CONTENTS

1) INTRODUCTION

1.1) Purpose of Design Document

The purpose of design document is to see the plan of the project that what we will do in our project. The design document is actually the picture that describes the end result of our project. All diagrams of design document has been developed by using STARUML software. In each diagram of design document all the modules of our smart to do list project. Each diagram has its own definition like class diagram shows the structure of the project consist of classes and interfaces. Data flow diagrams represent the Processes, Data store, Data flow and external entities of smart to do list. State transition diagram represents states and transition between states of smart to do list. Sequence Diagram is the interaction diagram which focuses on the message between the lifelines. Collaboration Diagram is the interaction diagram which focuses on the sequenced message between the objects. Component in deployment diagram shows the physical deployment of software components.

1.2) Scope of Design Document

From design document features, procedures, relations between processes and their dependencies of smart to do list can be clearly shown, which will be easy for developers in developing the project (As developer has already designed its project in design document), so it will be very helpful during development. It is also helpful for group of members of the project because every group member can develop its module by following the design document.

1.3) Acronyms & Abbreviations

- **UI:** User interface (User interacts with application or website).
- **DB:** Database (Structured set of data in Smart to do list).
- **CS**: C sharp (.cs file extension is a source code file written in C#)

1.4) References & Acknowledgement

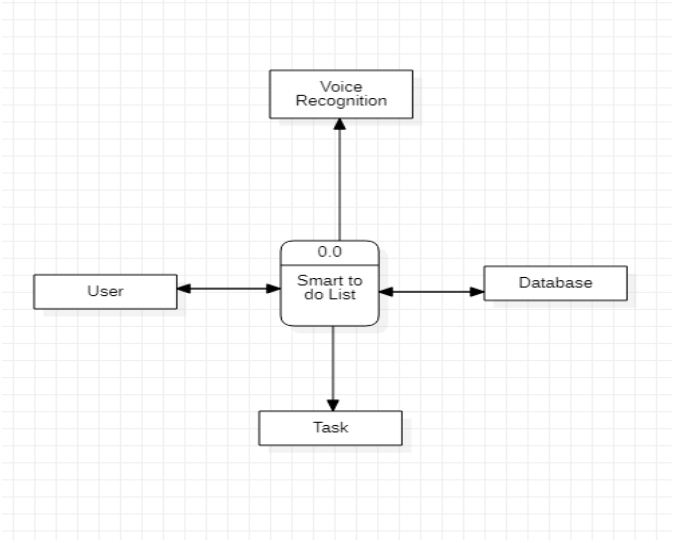
- https://www.guru99.com/interaction-collaboration-sequence-diagrams-examples.html
- https://www.guru99.com/uml-class-diagram.html
- https://www.smartdraw.com/data-flow-diagram/examples/
- https://www.visual-paradigm.com/guide/uml-unified-modeling-language/what-is-deployment-diagram/

1.5) Remainder of the document

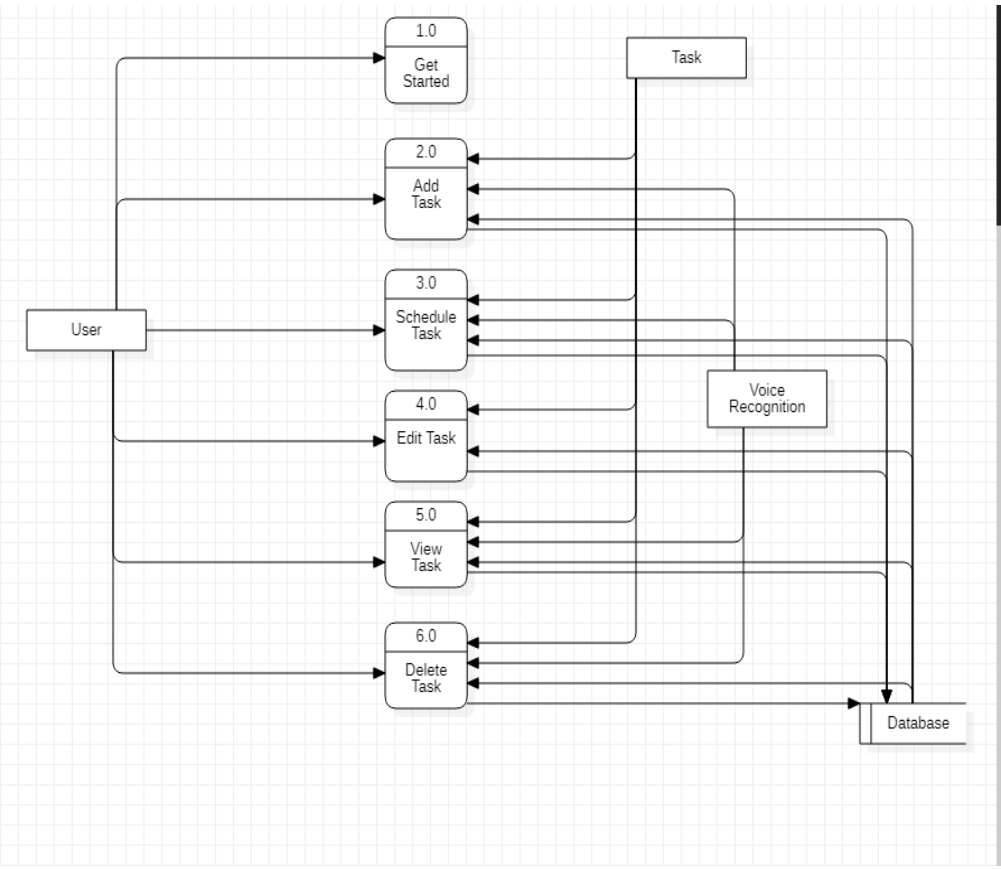
In this documentation, Functional Modeling, Object Oriented Design, Behavioral Modeling and Deployment View of our project are defined in such a way that it is understandable by both the consumer and technological person. Classes and Interfaces are well defined in Class Diagram and states of the application is shown clearly in the Behavioral Modeling. On deployment side, The UI and database components are defined and the connection of database using Class Library is also shown.

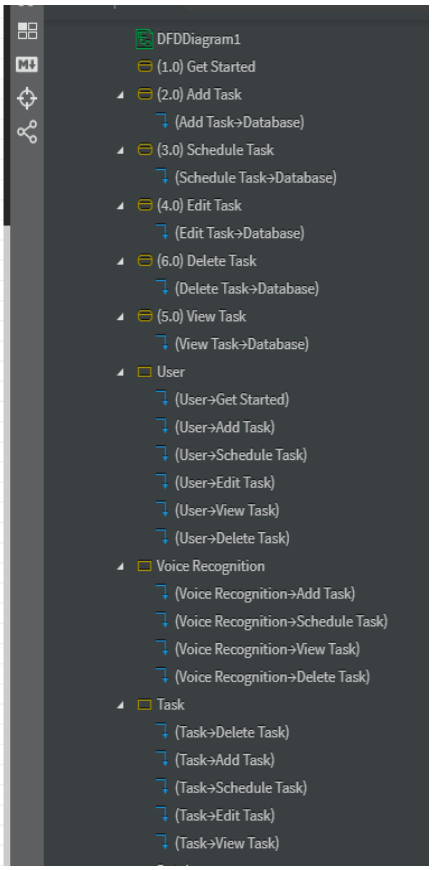
2) FUNCTIONAL MODELING

2.1) DFD Level 0:

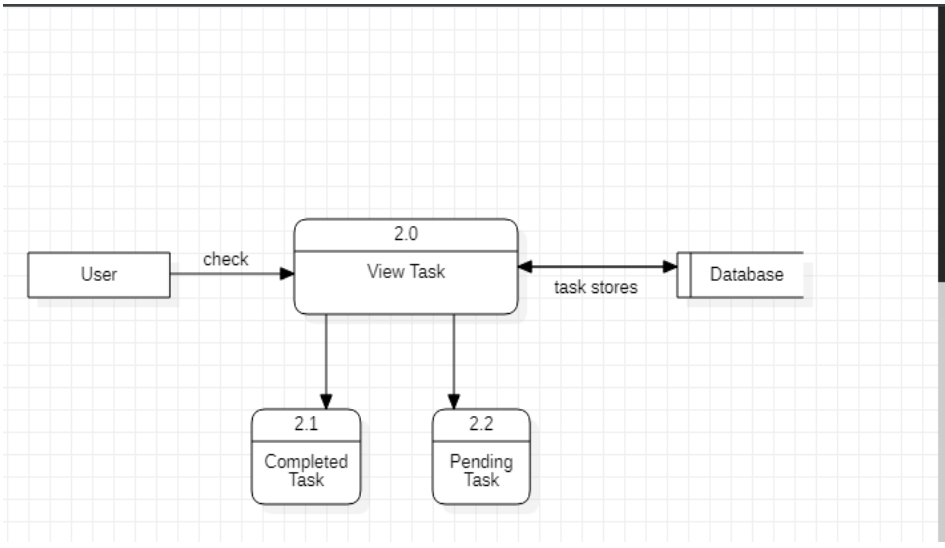


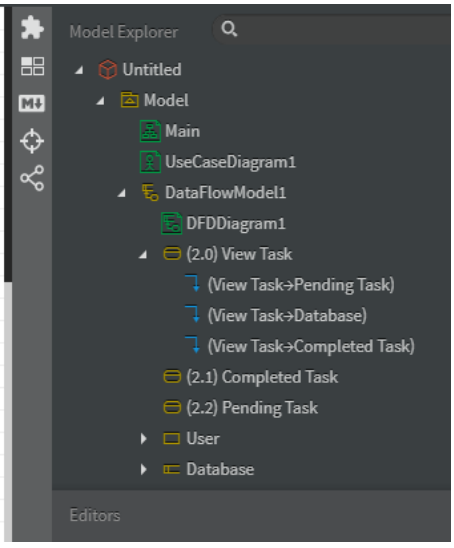
2.2) DFD Level 1





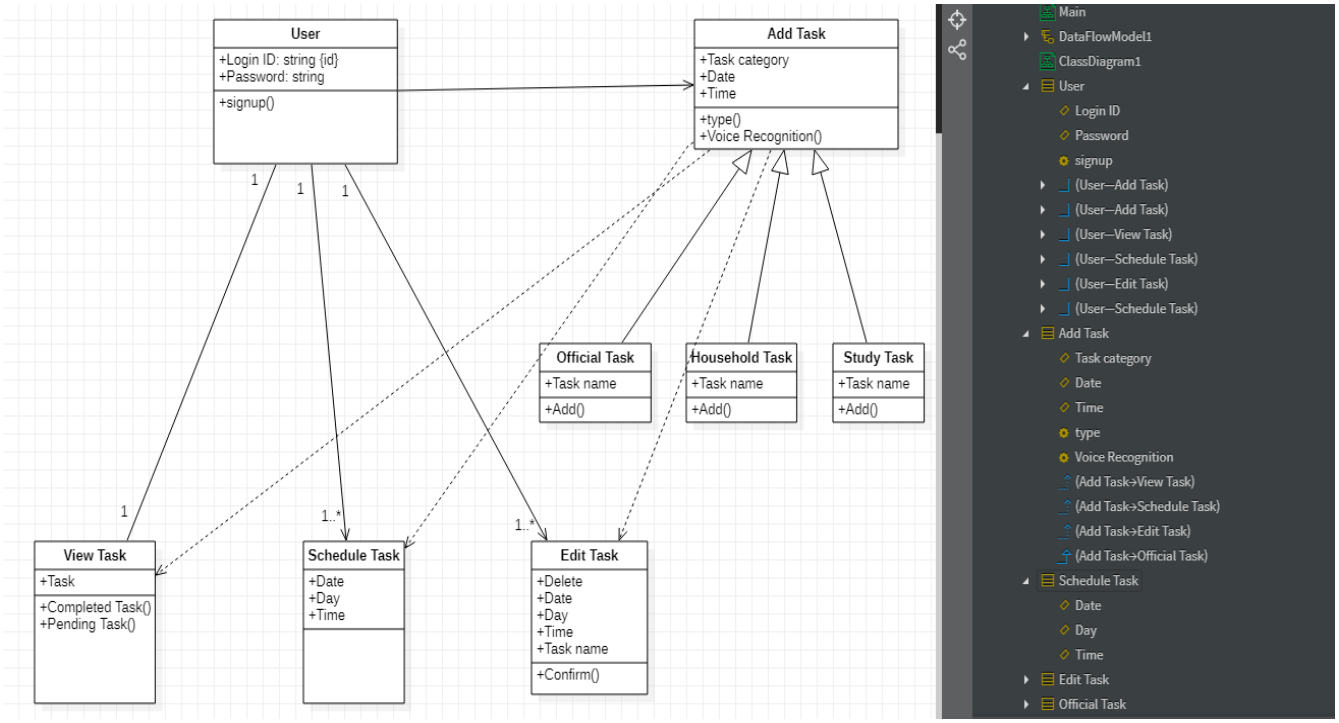
2.3) DFD Level 2:





3) OBJECT ORIENTED DESIGN

3.1) Class Diagram:

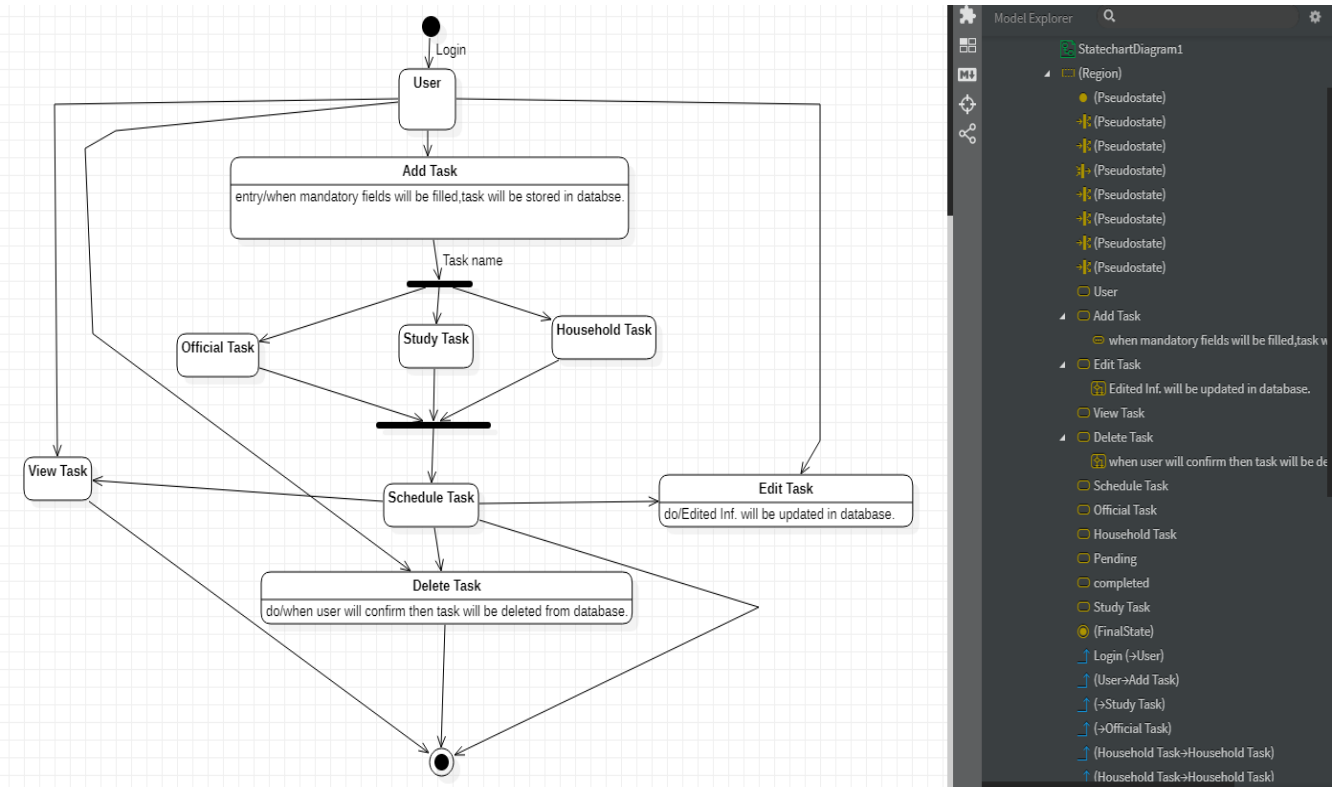


3.2) Data Dictionary:

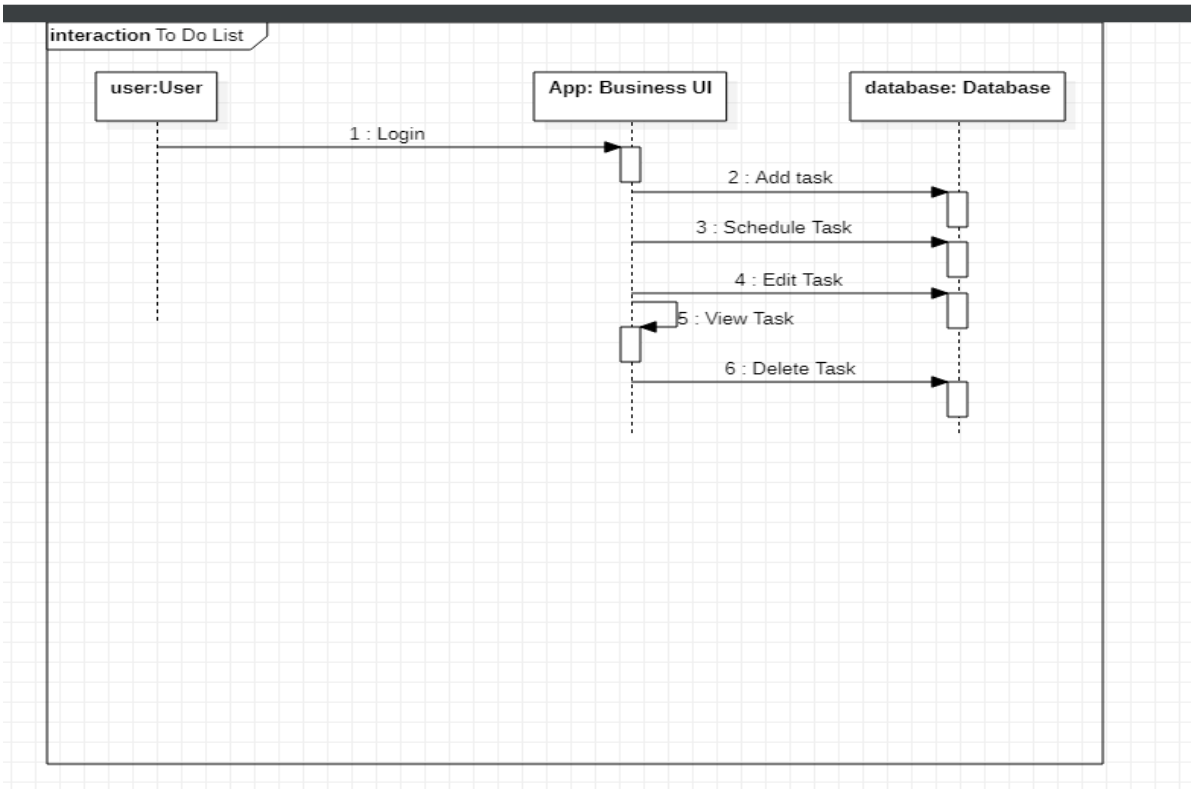
Field_name	Field_datatype	Constraint	Range	Size	Examples
Task_ID	Integer	Primary Key	1-999	30	1022
Task_name	String	Not null	1-100	255	Submission of project
Task_date	Date	Not null	-	10	11/1/2020
Task_day	String	Not null	-	10	Monday
Task_time	Time	Not null	-	10	12:00
Status	String	Not null	1	10	Yes/No
Category_name	String	Not null	1--3	255	Study Task

4) BEHAVIORAL MODELING

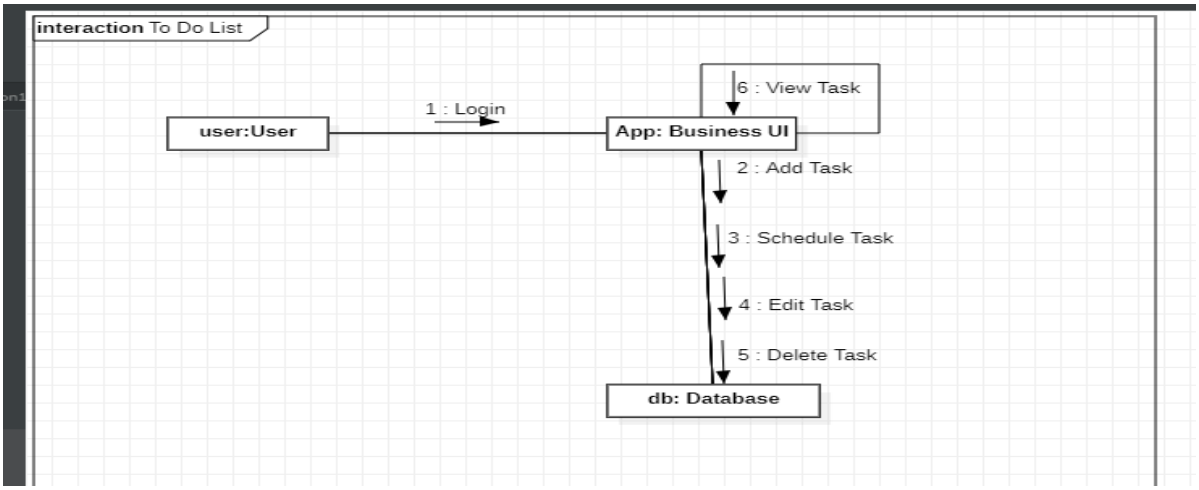
4.1) State Transition Diagram



4.2) Sequence Diagram



4.3) Collaboration Diagram:



5) DEPLOYMENT VIEW

5.1) Components in Deployment Diagram