

# METU CENG491 2015 FALL

## START-UP DOCUMENT

G08P13

**Group Name: Tetris**

**Project Name: Smart Driver Assistant**

### 1. System Architecture

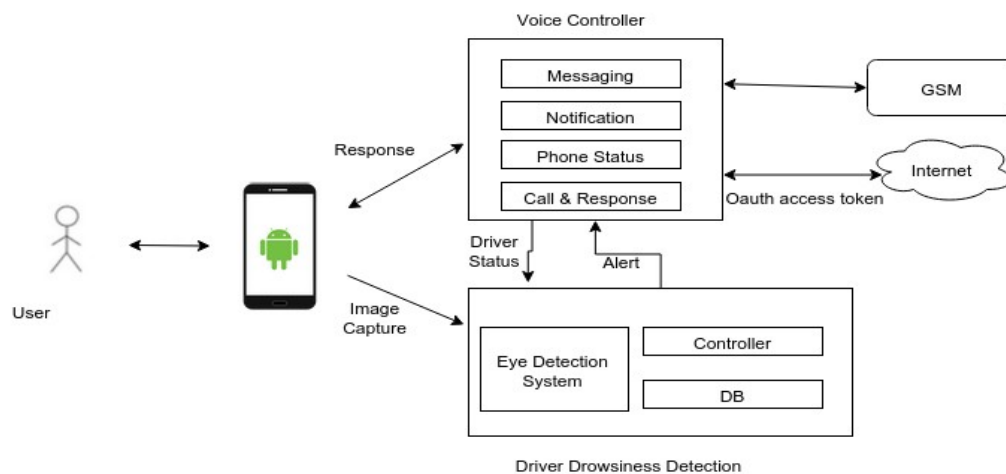


Figure 1: System Architecture Diagram

Driver will interact with phone using voice commands. Based on the command Voice Controller component is going to choose the module to execute. Voice Controller's subcomponents can interact with GSM or Internet according to the command.

Messaging: this module is responsible for sending and reading the messages through GSM or Internet.

GSM is responsible for sending and reading messages using mobile data.

Notification: this module is responsible for giving information about incoming notifications. This notification can be an incoming message from social media.

Phone Status: This module will give information about current battery level and warn the driver to plug the phone to charge.

Call & Response : This module is responsible for receiving and performing an outgoing call.

Driver Drowsiness Detection component is going to collect images from camera of the phone , process them using Eye Detection System subcomponent and interact with Voice Controller component using Controller.

This component will interact with Voice Controller component when driver will be needed to be alerted.

## 2. Tentative Time Plan

- Identify and itemize all tasks to be performed as a team in the first semester. Assign a unique TaskID for each task. Give a short name and brief description for each identified task.

TaskID	Short Name	Description
T1	Setting Work Environment	Downloading Android Studio, installing necessary plugins , creating empty project on gitlab
T2	UI Design	Initial Design for software interface, planed to be responsive design
T3	Text to Speech	Generating speech from the given text, customizing and getting familiar with TTS library.
T4	Speech to Text	Performing voice recognition based on VoiceRecognizer or Speech to Text library
T5	Commands Interpretation	Determining the formats of the commands and their functionalities
T6	Phone Status	Emphasizing the battery level
T7	GSM/Internet	Connecting to GSM or internet based on the module
T8	Notification System	Handling the incoming Notifications
T9	Messaging System	Handling the incoming Messages and sending messages
T10	Call/Response	Controlling incomings and performing outgoing calls

- Construct your time plan as a simplified Gantt chart, as shown in the following table.

TaskID	Iteration1	Iteration2	Iteration3
T1	⊙		
T2	⊙	⊙	
T3	⊙	⊙	
T4	⊙	⊙	⊙
T5		⊙	⊙
T6		⊙	
T7		⊙	⊙

T8		⊗	⊗
T9			⊗
T10			⊗

### 3. Deliverables

- Identify and list all deliverables of your project for the first 3 sprints.
- A deliverable is some component or sub-component, which is running and demonstrable to your assistant and your supervisor. That deliverable is of course subject to improvement over time.
- Fill in the following table:

<b>Deliverable</b>	<b>Description</b>	<b>When? (Sprint#)</b>
D1	Setting Work Environment & UI Design	1
D2	Text to Speech	1
D3	Speech to Text	2
D4	Commands Interpretation	1,2,3
D5	Phone Status	2
D6	GSM/Internet	3
D7	Notification System	3
D8	Messaging System	2,3
D9	Call/Response	2,3

#### 4. Workload Distribution

Fill in the following table to distribute the workload for the first semester among your team members.

	<b>Sprint1</b>	<b>Sprint2</b>	<b>Sprint3</b>
SEYMUR	T1 D1, T2 D1, T3 D2	T4 D3 ,T6 D5	T7 D6, T10 D9
BLEDI	T1 D1, T2 D1	T9, T10	T7 D6, T8 D7, T9 D9 ,T10 D9
MEHMET	T1 D1, T2 D2, T5 D4	T3 D2, T5 D4	T5 D6, T9 D9
NAIL	T1 D1, T2 D2, T5 D4	T4 D3, T5 D4,T6 D5 ,T10	T5 D6, T10 D9