

# CENG 322 Deliverable 1

Team Name: **Coding Comrades**

Project Name : **BusCare +**

Team members:

**Naman Bhavinbhai Shah : N01392496**

**Jaskirat Singh: N01403975**

**Vishesh Bansal: N01395119**

**Aryan Sood: N01393003**

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# Team Contract

## Team Contract

### CENG-322 TEAM PROJECT



Team Name: Coding Comrades

Project Name: BusCare +

*Please negotiate, sign, scan and include as the first section in your Deliverable 1.*

Please note that if cheating is discovered in a group assignment each member will be charged with a cheating offense regardless of their involvement in the offense. Each member will receive the appropriate sanction based on their individual academic honesty history.

Please ensure that you understand the importance of academic honesty. Each member of the group is responsible to ensure the academic integrity of all of the submitted work, not just their own part. Placing your name on a submission indicates that you take responsibility for its content.

Team Member Names (Please Print)	Signatures	Student ID
Project Leader:  NAMAN BHAVINBHAI SHAH		N01392496
JASKIRAT SINGH	Jaskirat Singh	N01403975
VISHESH BANSAL		N01395119

ARYAN SOOD	<i>Aryan</i>	N01393003
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For further information read Academic Honesty Policy on <https://humber.ca/legal-and-risk-management/policies/search-by-students.html>.

By signing this contract, we acknowledge having read the Humber Academic Honesty Policy as per the link below.

<https://academic-regulations.humber.ca/2018-2019/17.0-ACADEMIC-MISCONDUCT>

### Responsibilities of the Project Leader include:

- Assigning tasks to other team members, including self, in a fair and equitable manner.
- Ensuring work is completed with accuracy, completeness and timeliness.
- Planning for task completion to ensure timelines are met
- Any other duties as deemed necessary for project completion

### What we will do if . . .

Scenario	Accepted initials	We agree to do the following
Team member does not deliver component on time due to severe illness or extreme personal problem	<i>N.S</i> <i>J.S</i> <i>V.B</i> <i>A.S</i>	a) Team absorbs workload temporarily <del>X</del> b) Team seeks advice from professor __ c) Team shifts target date if possible __ d) Other:

Scenario	Accepted initials	We agree to do the following
Team member cannot deliver component on time due to lack of ability	N.S V.B J.S A.S	a) Team reassigns component ____ b) Team helps member ____ c) Team member must ask professor for reference material <del>X</del> d) Other:
Team member does not deliver component on time due to lack of effort	N.S J.S V.B A.S	a) Team absorbs workload ____ b) Team "fires" team member by not permitting his/her name on submission ____ c) Other: <b>2 Warnings will be given, if the member doesn't put in effort, team decides to fire.</b>
Team member does not attend team meeting	N.S J.S A.S V.B	a) Team proceeds without him/her and will assign work to the absent member ____ b) Team doesn't proceed and records team member's absence <del>X</del>



Scenario	Accepted initials	We agree to do the following
		c) Team proceeds for that meeting but "fires" member after __ occurrences __
An unforeseen constraint occurs after the deliverable has been allocated and scheduled (a surprise test or assignment)	N.S J.S V.B A.S	a) Team meets and reschedules deliverable <del>X</del> b) Team will cope with constraint __ c) Other:
Team cannot achieve consensus leaving one member feeling "railroaded", "ignored", or "frustrated" with a decision which affects all parties	N.S J.S A.S V.B	a) Team agrees to abide by majority vote <del>X</del> b) Team flips coin __ c) Other:
Team members do not share expectations for grade desired	N.S J.S V.B A.S	a) Team will elect one person as "standards-bearer" who has the right to ask that work be redone __ b) Team votes on each submission's quality <del>X</del> c) Team will ask for individual marking and will identify sections by author __ d) Other:

Scenario	Accepted initials	We agree to do the following
Team member behaves in an unprofessional manner by being rude or uncooperative	J.S N.S A.S V.B	a) Team attempts to resolve the issue by airing the problem at team meeting <del>X</del> b) Team requests meeting with professor to problem-solve ____ c) Team ignores behaviour ____ d) Team agrees to avoid use of all vocabulary inappropriate to the business setting ____
Team member assumes or requests that his/her name be signed to a submission but has not participated in production of the deliverable	J.S N.S A.S V.B	a) Team agrees that this is cheating and is unethical <del>X</del> b) Friends are friends and should help each other ____ c) Team will submit with signature but will advise professor who will take action ____
There is a dominant team member who is content to make all decisions on the team's behalf leaving some team members feeling like subordinates rather than equal members	N.S A.S V.B J.S	a) Team will actively solicit consensus on all decisions which affect project direction by asking for each member's decision and vote ____ b) Team will express subordination feelings and attempt to resolve issue <del>X</del>

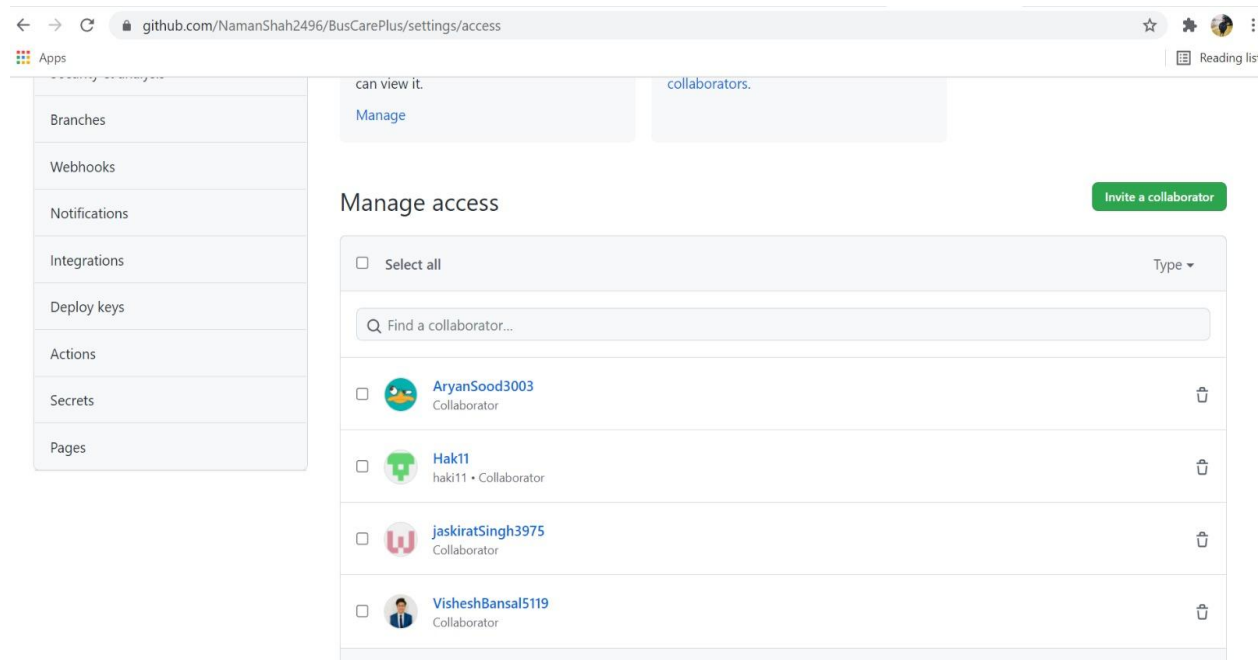
Scenario	Accepted initials	We agree to do the following
		c) Other:
Team has a member who refuses to participate in decision making but complains to others that s/he wasn't consulted	N.S J.S V.B A.S	a) Team forces decision sharing by routinely voting on all issues ____ b) Team routinely checks with each other about perceived roles <del>X</del> c) Team discusses the matter at team meeting ____



# Project Repository Link:

<https://github.com/NamanShah2496/BusCarePlus>

# Invitation Link



# Project Background and Description:

## 1. Project goals and Final vision:

For the project goal we have decided to design a system that looks after Bus maintenance and safety. Our system would be monitoring Speed of the bus, Co2 level inside the bus, Temperature inside the bus and will keep a count of the number of passengers in it. If any value is more than the preset values it sends a notification via the app to the user to take appropriate action.

Our Final vision is to benefit the environment, bus operating companies as well as passengers. We believe that sharp minds can lead to betterment of the community and that's why we are called engineers, who can think innovatively and bring changes to society. This product is not made for financial gain, but to help the community and save our mother earth.

## 2. The software and hardware aspects for this project:

Hardware: In this project the use of hardware is to send the data to raspberry pi which is further sent to the mobile app via cloud. When the sensor sends data to the app, the app checks if the value exceeds the preset value and if it does, sends a notification to the user.

Software: In the Software part, firstly the person needs to authorize himself/herself from the login page and only then the access to the information about the bus will be granted. After a certain time interval, the app data would get refreshed automatically so if there is any fault found then it would be firstly notified and also it can be seen on the app. For instance, if the temperature inside the bus is getting lower than specified temperature value, then the maintenance section of the application will show that temperature inside the bus is getting low and the app will notify the user as well.

### **3. Screen flows in the app:**

- The user needs to authenticate himself/herself on the login page in order to get access to the information presented by the app.
  - The app home page would appear after successful login.
  - Since we would be using navigation drawer layout for this project, there will be a few options on the side menu out of which two of them would be safety and maintenance
  - If the user clicks on the safety tab, he/she would get the update about passenger count on the bus and the speed of the bus.
  - If the user clicks on the maintenance tab, he/she would get the information about the Co2 levels emitted by the bus and the temperature inside the bus.
4. Our team will definitely welcome every feedback we get on our work and after meetings if we feel that it is good enough for our project we will definitely incorporate it in our app. For instance, Professor Haki provided us with a suggestion on adding a notification feature to our app, so when the bus is not running as per ideal situation it will notify the user immediately.
5. We are planning to read/write from firebase. Our app would read the data sent by the sensors installed on the hardware via the firebase. We would also allow the user to write the data into the database.

# Project Scope:

## Technical Scope:

- App should be able to get real time data from firebase.
- It should have login/signup functionality.
- It should allow users to write into the database.
- App should send notification to the user when the preset value is exceeded.

## Timeline:

We have decided that the team will work on one main feature per week and some work on minor features will be done during that time.

The main feature of our app would be the safety and maintenance tabs and the minor features will be other smaller tasks such as About user, help section and login page.

The expected timelines for our project is mentioned below:

Week 4: Learn about firebase and will create a basic structure for the app.

Week 5: Firebase learning continue and meanwhile work on main and minor features starts

Week 6: Implementation of knowledge of firebase into the main features of the app.

Week 7: Completion of one major feature and complete some of the minor tasks which includes debugging of the code as well.

Week 8: Reading week

Week 9: Beginning of another major feature and working on remaining minor tasks begins.

Week 10: Integrating firebase with other major features.

Week 11: Documentation completion

Week 12: Debugging and final app testing.

Week 13: Project completion.

## Theme,Epic and stories:

