Requirements Sheet

## Team Members

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Use Case (Describe how it will be used normally)

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| Normal Use Case A user obtains the QR code for the class they are interested in. *In our prototype, we can generate the QR codes with the lab program for today. The QR code can contain anything we want to store upto 4,296 characters or a small picture (2KB). Therefore, we can store all the information about the class*.  The user then scans the QR code with our program*. In this case a webcam or phone photo can save the image to a computer folder.* The scanning computer has a location (e.g. in reception) and it gives an automated message to the user telling him/she how to get from this point (reception) to the room the class is on.  In addition, the computer software will check the time to ensure the class is on today. It will give an appropriate message to the user.  If the class’s status is cancelled, the computer will also inform the user.  Finally, the user could have the option of having the directions texted to his/her phone number. Second use case A visitor to the college may have some business with some officer in the college. Upon scanned the meeting QR code received via email previously, the user can scan this email and it will be given directions how to get to the correct office. Again the time of the meeting will be checked. |

Possible error cases (What events would stop the product working)

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| Error Case 1 The QR data is not found in the database. This could be for an out of date code. The system will speak that the code is not recognised.  Example: User scans the QR code  *Hello, I’m sorry, the QR code you scanned is not recognised. Please go to reception for further help* Error Case 2 The class or meeting is over  Example: User scans the QR code but the class/meeting is past  *Hello, I’m sorry, class you are attending is over (or has started).* |

# Requirements

## Hardware

|  |  |  |
| --- | --- | --- |
| No | Must/Should  /May | Requirement |
| 1 | MUST | Laptop to run the software |
| 2 | MUST | Webcam to get a picture of the QR code |
| 3 | MUST | Speaker to give the directions to the user |
| 4 | CAN | Phone used as laptop / speaker / webcam |

## Software

|  |  |  |
| --- | --- | --- |
| No | Must/Should  /May | Requirement |
| 1 | MUST | ECLIPSE |
| 2 | MUST | QR code reader to get the date |
| 3 | MUST | Audio recording software |
| 4 | MUST | File reader to get the picture by the webcam |

## User Interface

|  |  |  |
| --- | --- | --- |
| No | Must/Should  /May | Requirement |
| 1 | MUST | A camera interface to take the picture of the QR code |
| 2 | MUST | A ‘’ GO ‘’ button to take the picture and launch the program |
| 3 | MUST | Answer via speakers |
| 4 | SHOULD | Answer written (if deaf person or can’t hear the directions) |
| 5 | SHOULD | Wrong type of QR code warning message  Wrong / good warning message |

## Performance

|  |  |  |
| --- | --- | --- |
| No | Must/Should  /May | Requirement |
| 1 | MUST | -Less than 5s to record the QR code  -Only one picture needed to get the answer  -Never run the direction code for a QR code of the wrong type |
| 2 |  |  |
| 3 |  |  |

## Safety/Quality

|  |  |  |
| --- | --- | --- |
| No | Must/Should  /May | Requirement |
| 1 | SHOULD | Sound not too loud |
| 2 | SHOULD | Screen not too bright |
| 3 |  |  |

## Ethical

|  |  |  |
| --- | --- | --- |
| No | Must/Should  /May | Requirement |
| 1 | SHOULD | Written answer for deaf people |
| 2 |  |  |