Team Minutes for **Team 7**

Meeting Support (CATME)

Delete the instructions in black italics and replace them with your team's information. Add new information after each meeting and save the document with the current date after the document name. This will create one long document that includes the minutes of all team meetings. You will have the old versions saved under document names with the previous dates in case they are needed.

Team Members' Names
Jonah Bertolino
Hunter Burnham
Joseph Kirby
Caden Nubel
Joel Shorey

Meeting Agenda Template

Meeting Date: *Put date here*	Start Time: *Record time meeting started* End Time: *Record meeting end time* **Summary of Meeting**
1. Attendance	*Record members present (if absent, include reasons and whether teammates were notified in advance).*
2. Purpose of Meeting	
3. Discuss work completed since last meeting.	*Team members report on what has been accomplished. Record notes of those reports here.*
4. Summarize work completed during meeting	*Summarize discussion and work accomplished.*
5. Review action items to be completed after meeting	*Who will do what by when?*
6. Schedule next meeting	*Note time, place, and purpose.*
7. Recording secretary	*Note who took the meeting minutes and the date that meeting minutes were circulated by e-mail.*

Meeting 1

Meeting Date: *2/12/2024*	**Start Time: 2:00 pm End Time: 3:00 pm Summary of Meeting**
1. Attendance	*All members attended*
2. Purpose of Meeting	*Start of project meeting*
3. Discuss work completed since last meeting.	*Jonah Bertolino: Start of project, no previous work*
	Hunter Burnham: Start of project, no previous work
	Joseph Kirby: Start of project, no previous work
	Caden Nubel: Start of project, no previous work
	Joel Shorey: Start of project, no previous work
4. Summarize work completed during meeting	*Discussed Objectives for the next week, assigned tasks to each group member, and discussed logistics on how to work with each other over the course of the project. Started discussing how to go about completing each task.*
5. Review action items to be completed after meeting	*Jonah Bertolino: Determining Quadrant of Aruco Marker*
	Hunter Burnham: Implement LCD Threading, Communication with Arduino
	Joseph Kriby: Establish GitHub on Pi, Assist Hunter and Jonah
	Caden Nubel: Create and implement PI controller
	Joel Shorey: Create and implement PI controller
6. Schedule next meeting	*Monday 2/19/2024 at 12:00 pm*
7. Recording secretary	*Hunter Burnham*

Meeting 2

Meeting Date: *Put date here*	**Start Time: 1:30 pm End Time: *2:30 pm* Summary of Meeting**
1. Attendance	*All members attended*
2. Purpose of Meeting	*Talking about documentation and wrapping up mini project.*
3. Discuss work completed since last meeting.	*Jonah Bertolino: Interfaced threading code and aruco quadrant detection code/developed code*
	Hunter Burnham: Established the threading and I2C communication between pi and Arduino

	Joseph Kirby: Established Github on Pi, worked on aruco detection and handling of markers
	Caden Nubel: Made the PI controller code
	Joel Shorey: Matlab simulation for PI controller, helped interface computer vision with controls
4. Summarize work completed during meeting	*Discussed all of our tasks that we completed since last week, talked about next steps for completing documentation and cleaning up code, preparing for end of week assignments*
5. Review action items to be completed after meeting	*Jonah Bertolino: Complete documentation, update Github*
	Hunter Burnham: Complete documentation, update Github
	Joseph Kirby: Complete documentation, update Github
	Caden Nubel: Complete documentation, update Github
	Joel Shorey: Complete documentation, update Github
6. Schedule next meeting	*Monday Feb 26, 2:00pm*
7. Recording secretary	*Joseph Kirby*

Meeting 3

Meeting Date: 2/28/2024	**Start Time: 2:00 pm End Time: 4:00 pm Summary of Meeting**
1. Attendance	*Jonah Bertolino, Joseph Kirby, Hunter Burnham, Caden Nubel, Joel Shorey*
2. Purpose of Meeting	*Pi group discussed how to find angle from camera to Aruco marker. Arduino group is figuring out how to get the robot to drive in a straight line.*
3. Discuss work completed since last meeting.	*Jonah Bertolino: Figured out how calibrate the camera.*
	Hunter Burnham: Put some headers in Mini Project code. Worked on finding angle from camera to Aruco marker using camera calibration
	Joseph Kirby: Worked on finding angle from camera to Aruco marker using camera calibration
	Caden Nubel: Worked on the code to get the robot to drive straight and thought abstractly about how to decompose the problems.
	Joel Shorey: Finished up all the Mini project documentation code. Started working on Demo 1 with Caden.

4. Summarize work completed during meeting	Pi group discussed what we were going to work on moving forward, such as finding the distance from the center of the screen to the Aruco marker. Arduino group
5. Review action items to be completed after meeting	Jonah Bertolino: Find distance from camera to Aruco marker
	Hunter Burnham: Find distance from center of screen to the Aruco marker on the screen
	Joseph Kirby: Find distance from center of screen to the Aruco marker on the screen
	Caden Nubel: To have the robot drive in a straight line.
	Joel Shorey: To have the robot drive in a circle
6. Schedule next meeting	Next Monday at 2:00 pm
7. Recording secretary	Jonah Bertolino

Meeting 4

Meeting Date: *Put date here*	Start Time: *Record time meeting started* End Time: *Record meeting end time* Summary of Meeting
1. Attendance	Jonah Bertolino, Joseph Kirby, Hunter Burnham, Caden Nubel, Joel Shorey
2. Purpose of Meeting	Pi group discusses how they have a backup plan for finding the angle using math. Today they need to figure out how to find the angle using calibration.
3. Discuss work completed since last meeting.	Jonah Bertolino: Found the horizontal FOV while working with Joseph of the camera so we could correctly find the angle with 0.3 degrees using math.
	Hunter Burnham: Found the angle using calibration using a camera matrix
	Joseph Kirby: Found the horizontal FOV while working working with Jonah using math. Also assisted Hunter with coding the calibration.
	Caden Nubel: Rewrote the entire code to implement a forward velocity and rotational velocity vector. Also tuned controllers.
	Joel Shorey: Debugged the controllers. Worked on debugging the first implementation strategy. Put together turning and moving forward code.

4. Summarize work completed during meeting	
5. Review action items to be completed after meeting	*Jonah Bertolino: Create a video presentation of camera finding angle*
	Hunter Burnham: Create a video presentation of camera finding angle
	Joseph Kirby: Create a video presentation of camera finding angle
	Caden Nubel: Finish tuning and figure out how to drive straight and rotate properly then create a video presentation.
	Team member: Finish tuning and figure out how to drive straight and rotate properly then create a video presentation.
6. Schedule next meeting	*Monday at 2:00 pm*
7. Recording secretary	*Jonah Bertolino*