ZIFFHH

Team

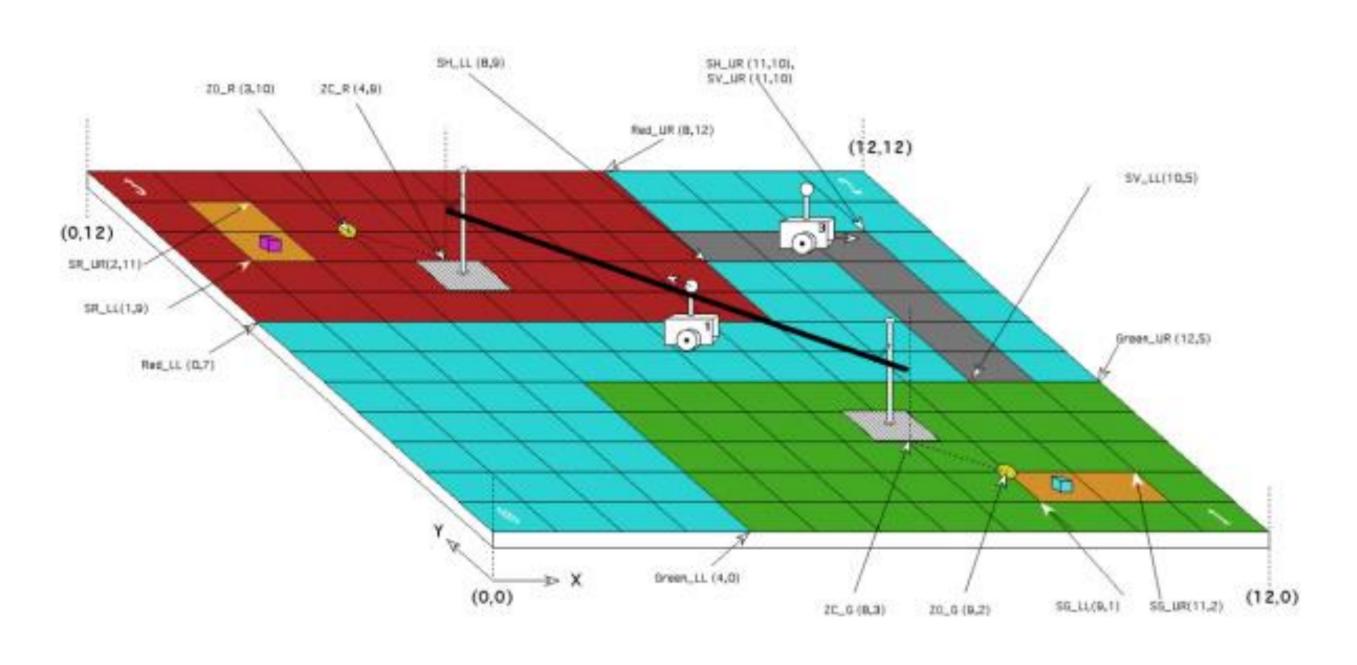
Paarth Kalia Design Team Manager Priscilla Ip Documentation Manager Younes Boubekeur Software Team Lead Ismail Faruk Hardware Team Lead Chaoyi Liu Testing Team Lead Mahad Khan Software/Test Engineer

# Objective

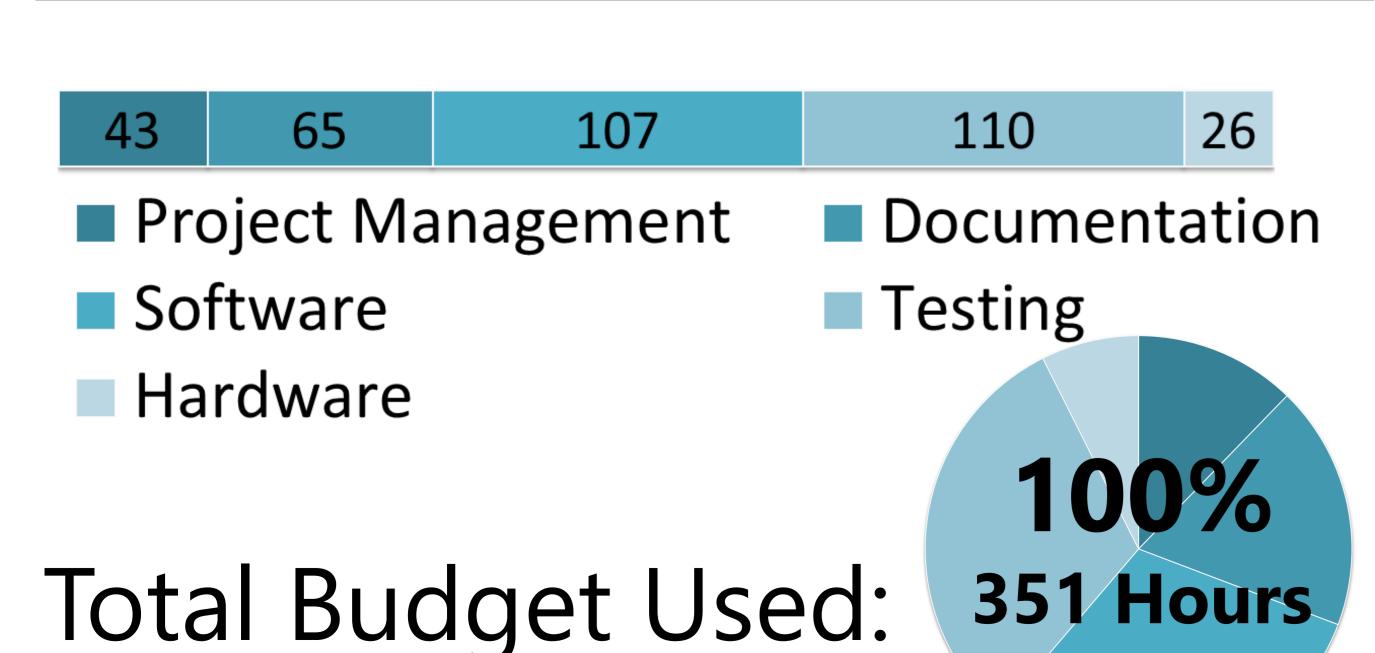
zip-line-Construct autonomous traversing robot that can play a one-on-one version of the game "Capture the Flag"

#### Specifications

- On a 12"x12" playing field, travel to the enemy zone via the overhead zip line or shallow water crossing as specified
- Capture the enemy flag in the search zone by beeping 3 times
- Localize in 30 seconds and complete the task in 5 minutes



## Management



Design Process

Requirements

Resources

Constraints

Project Management **Identify Subtasks** Allocate Resources

Design, Test & Redesign

Software

Code modularity

Rich Javadoc API

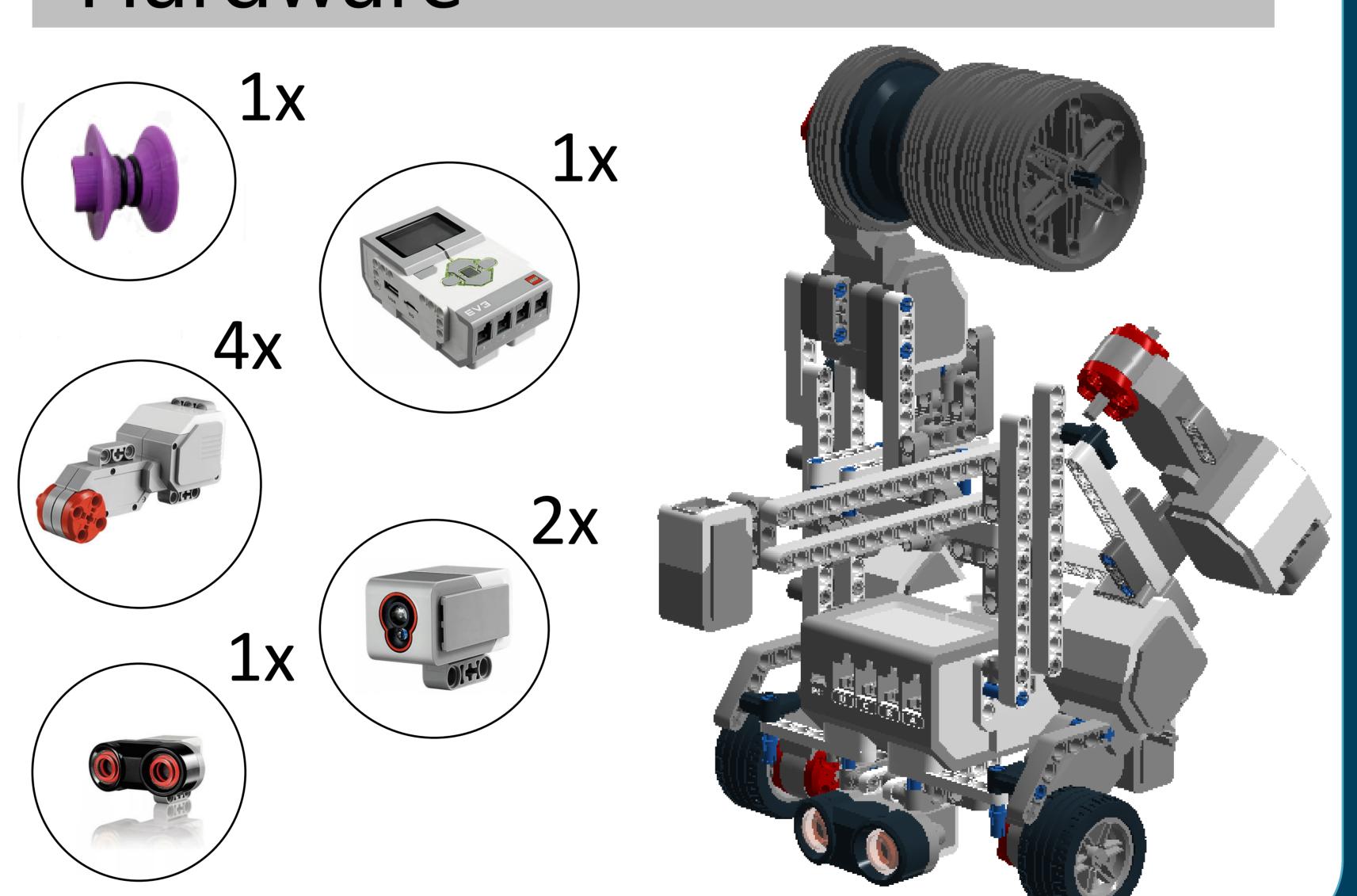
Find Alternatives Implement Document

Key features in our software system:

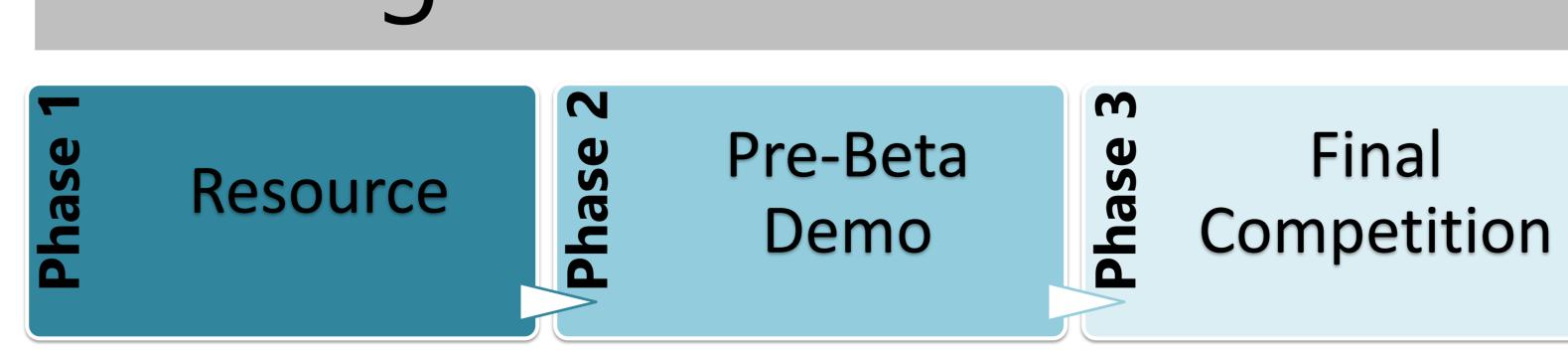
Minimal threading and recursion

**Initialize Sensors,** 

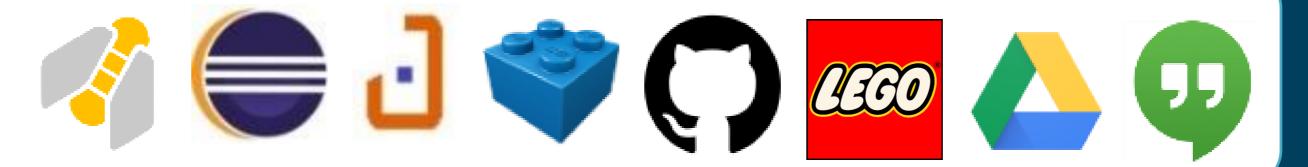
#### Hardware



### Testing



Tools















START -Motors, start Odometer **Receive coordinate** data via Wi-Fi **Red or Green** team? **Localize to Localize to** relative Origin relative Origin **Traverse river Traverse river using** level crossing using zipline **Search for Search for** opponent flag opponent flag **Capture flag Capture flag** Navigate back to start **Navigate back to start** using level crossing using zipline STOP

END