## Object: Environment + ID: int + size: int + count: int + pox\_x: int + size: int + pos\_y: int + boundary[2]: int + orientation: int + \*objects: vector<Object> + speed: int + update(int): void + color: float[] + registerObject(Vector): int + enum ObjectType{Robot, Target, Obstacle} + touchSensorReading(): int + enum ShapeType {Circle, Triangle, Quad}; + homingSensorReading(): Vector + method(): Type + rotate(): void + translate(): void + move(): vector + setShape(ShapeType): void + setColor(float∏): void + setType(objectType): void + setPosition(double, double): void + setSize(double): void + setOrientation(double): void + setSpeed(double): void + getXPosition(): double + getYposition(): double + getSize(): double + getOrientation(): double + getSpeed(): double + move(double): Navigate + getColor(): float\* + getObjectType(): ObjectType Simulation + getShapeType(): ShapeType + numRobot: int + getID(): int + numObstacle: int + detectWall(int, int):Wall + numTarget: int +detectObstacle(Object): bool + oldTimeSinceStart: double + physicalObjects: vector<Object> + \*env: EnvironmentClass + display(): void + gluiControl(int): void + renderObject(Object): void + leftMouseDown(int, int): void

+ leftMouseUp(int, int): void + deletecollision(): void