

#### Task description:

The task is to complete **the template** given below. You will change existing and implement new functions in an existing codebase that simulates the interaction between a robot and its environment. The code we provide provides a basic skeleton, and you will complete it by implementing logic for the robot's actions, such as going to the park and attending the dance club. There are instructions in the code base's comments that provide more detailed guidance on what is expected.

In general, your code should:

- Represent the environment with a World class.
- Give each robot specific properties such as name, battery level, distance to the park, and type.
- Check whether the robot can perform various activities based on the environment and the condition of the robot.

#### Delivery:

- **Group delivery via project groups (1-3 students)**
- **A .ZIP file containing the code (the entire project)**
- **A .PDF file containing the code from the .java file, but then in PDF format**

The PDF file can be created by printing the .java file from IntelliJ. Select the file in IntelliJ. Choose File->Print...-> Print -> click the Print button->from the Name drop-down menu, choose Microsoft print to PDF -> Choose where you want to put the file.

Instructions for zipping the project: [How to Zip the Project](#)

Group delivery means that you join a project group (persons -> project group)

Goal:

[Oblig2Mal.zipDownload Oblig2Mal.zip](#)

Extra tasks (optional):

If you want to extend the task, try the following:

- - o Create a constructor for the Robot class so that you can initialize the robots with values when they are created).
  - o Create getters and setters for the variables. Feel free to include logic for validating the values that are set. For example: Should it be allowed to set World Day to -10?)
  - o Add that activities (such as going to the park) reduce the battery percentage to the robot.
  - o Create more activities that the robots can perform, such as charging or others tasks.
  - o Add more factors to the World class, such as time of day or slippery road conditions, such as affects whether the robot can perform an activity.
  - o Create several robots and test how different robots handle the different activities.

