

CISC 1003 - EXPLORING ROBOTICS



PROGRAMMING FUNDAMENTALS

Creating a successful robot

- Creating a successful robot takes team effort
 - Between humans and robots
- Humans is responsible for:
 - identifying the task
 - planning out a solution
 - Explaining to the robot what he needs to do
 - To reach the goal
- Robot is responsible for:
 - Following the instructions it is given
 - Thereby carrying out the plan

Creating a successful robot

- Humans and machines do not speak the same language
- Therefore, a special language needs to be created
 - To translate the necessary instructions from human to robot
 - Such as the NXT-G we are working with
 - These are called programming languages



Programming Language

- Instructions written in programming languages are called programs
 - Created by the programmer
- The programmer needs to:
 - identify the task
 - plan a solution
 - Produce a program that the robot will understand
- The robot will run the program
 - And accomplish the task it was given
 - Assuming the program is correct

Programming Language

- What are the challenges?
- The robot only follows the program
 - It does not think by itself
 - Only has the capabilities that the program gives it
 - The programmer is responsible for:
 - designing a solution
 - Programming the robot to follow it



Lab time!

- Let's work with our robots!

