

Names: _____

Period: _____

Servo Robot Assessment

Robots are an essential part of modern life, performing tasks like cleaning floors, lifting and transporting merchandise around Amazon warehouses, and welding car parts. In this project, you will be working in pairs to design your own robot to help make life easier. Your robot should use a servo motor to control a physical mechanism in response to some sort of input. This could be user input, like a button or remote, or sensor data like the light or distance sensor.

This assignment counts 40 points in the Assessment category of your grade.

Technical specifications/grading criteria:

- Servo motor controls physical hardware (10%)
- Physical hardware designed for the purpose of the robot (20%)
- Robot responds to input data (20%)
- Robot successfully performs intended task (20%)
- Code uses self-defined functions and functions from servo library in order to create a clear, concise, and understandable program (20%)
- Worksheet below is completed (10%)

Optional extensions:

- Use the 3D printer or laser cutter to create custom-designed hardware
- Incorporate input data from a new component, such as the joystick or tilt switch

Before you start building/programming: sketch a design of your project, showing the physical hardware and how the motor connects.

Video of functioning robot. Make sure to include your names in the video. Make sure the video shows the robot responding to input.

Paste your completed code here:

What task does your robot perform?

Identify one bug that you encountered while coding (OTHER than mistyping a word or forgetting a semicolon). What was your original code and why didn't it work? What did you change it to and why

did that work? *(If you didn't encounter any bugs while programming, then you haven't challenged yourself enough—make your program more complex or add some of the extensions until you encounter a bug)*