**Abstract 10%**

**https://writing.wisc.edu/handbook/assignments/writing-an-abstract-for-your-research-paper/**

An abstract is a short summary of your (published or unpublished) research paper, usually about a paragraph (c. 6-7 sentences, 150-250 words) long. A well-written abstract serves multiple purposes:

* an abstract lets readers get the gist or essence of your paper or article quickly, in order to decide whether to read the full paper;
* an abstract prepares readers to follow the detailed information, analyses, and arguments in your full paper;
* and, later, an abstract helps readers remember key points from your paper.

**Introduction 10%**

In this project we will be making use of our programming knowledge in python in order to program a robot arm in a simulation environment that will be used in this project to demonstrate a simple welding operation using python. In this operations a welding torch the ‘Abicor Binzel’ weld torch will be attached to the ‘ABB IRB 1200-5/0.9’ robot arm. Python programming will be used to weld the area around a target point in a specific shape to simulate welding a shape like hexagonal or circular shaped piece of metal onto another metal, and as such this program could be re-purposed using this same robot arm or one with a longer reach in combination with another tool such as a a engineering scribe to mark out shapes to help engineers to make more precise cuts or a laser cutting tool to laser cut simple shapes out of a material.

The rest of the document will contain information on how we went about accomplishing the welding operation using python programming.

**Related Studies 5% - explain your research and your sources that you used, research analysis… where it can be applied/used and what sources you used to come to ur proposed solution, all the code you got and where you got it from**

The goal of this project was to use the python programming language to automate some kind of industrial process, and in this case we chose to automate a welding operation.

**Proposed solution 25% - This is the approach you took to solving the problem/proposal, your code in here.**

**Maybe put Algorithm in here**

sda

**Results and Analysis 30% - The program, flowcharts, screenshots etc**

sda

**Conclusion and future scope/work 10%**

dasd

**Bibliography/References 10%**

**https://robodk.com/doc/en/PythonAPI/examples.html**

**https://robodk.com/doc/en/Basic-Guide.html**

[**https://robodk.com/doc/en/PythonAPI/intro.html**](https://robodk.com/doc/en/PythonAPI/intro.html)