NORTH AMERICAN UNIVERSITY
INSPIRATION INNOVATION GLOBAL COMPETENCE

Algorithmic complexity classifier.

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You will design and develop an algorithmic complexity classifier, that can identify the runtime complexity (e.g., Fig 1) of a given algorithm.

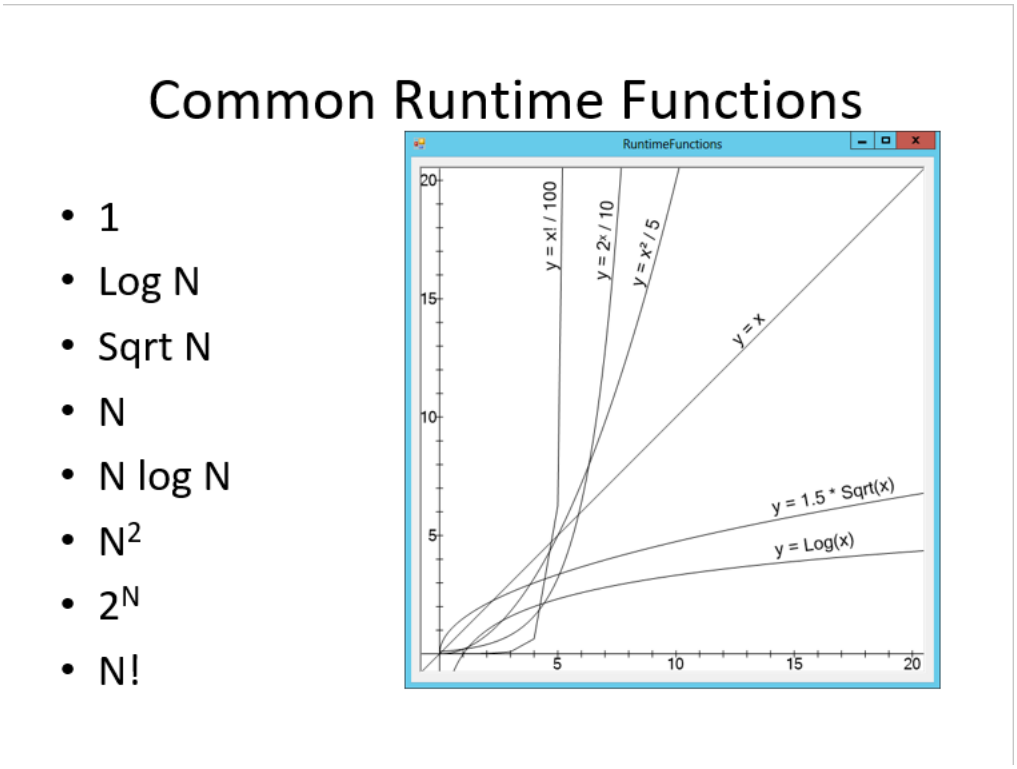

Figure 1 Common runtime algorithmic complexity classifier.

The project has the overall workflow:

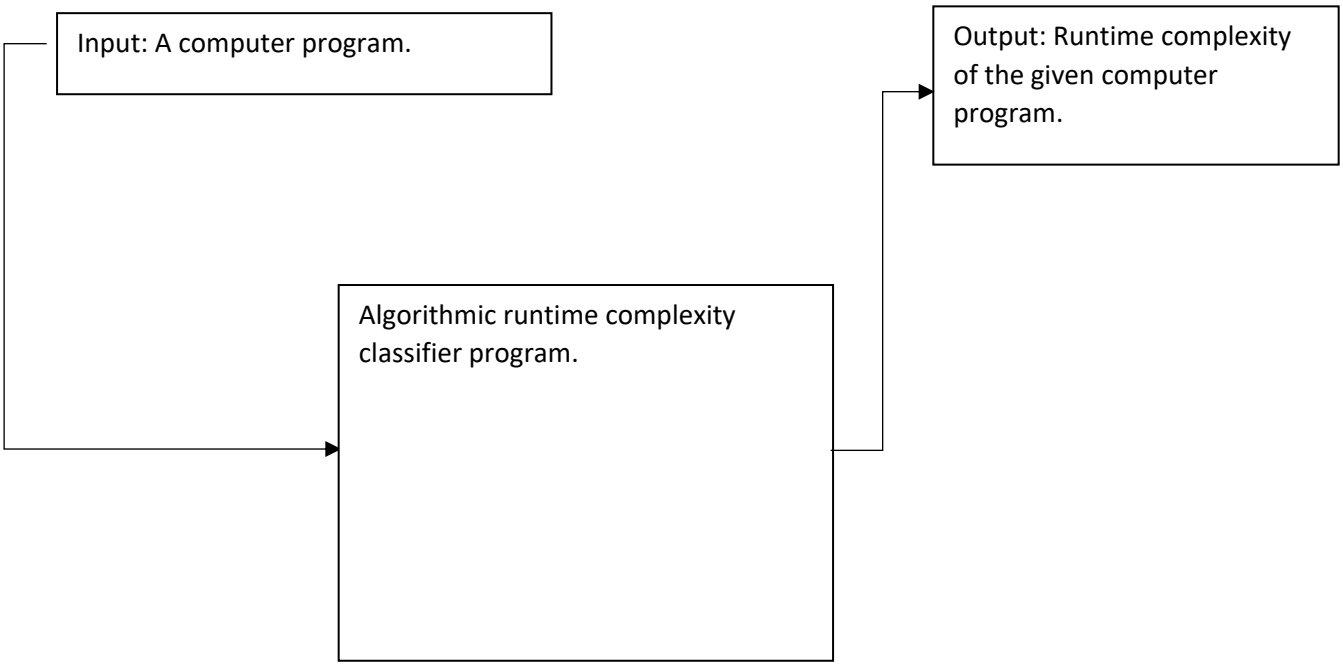

Figure 2. The workflow of the algorithmic runtime complexity classifier

This is a very exciting project. Interested students can continue working in this project for their final capstone project.

Software Engineering Goals:

1. Analyze the requirements
2. Design UML, Sequence Diagram, Class Diagram after fixing the requirements.
3. Design a prototype from step 2.

Algorithm Design Goals:

1. Analyze the programs of dependent for loops, recursion, that can be used to identify the complexity of the algorithm.
2. Implement the prototype of the program.