PROBLEM SOLVING AND PYTHON PROGRAMMING

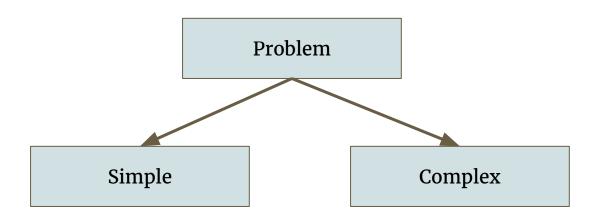
Rajasekaran AP/IT

Introduction to Problem

Rajasekaran AP/IT

Problem Solving

The process of finding solutions to difficult or complex issues.



Solution to the problem

P

Steps involved when solving the problem

Understanding

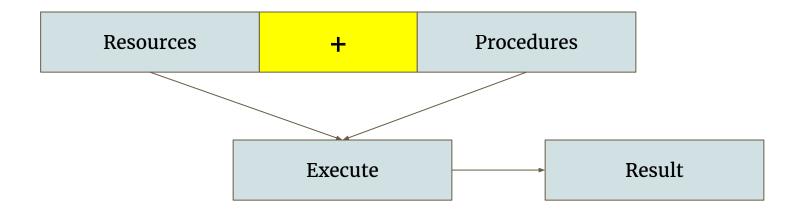
Planning the Sequence of Actions

Execution of Plan

Testing the Result

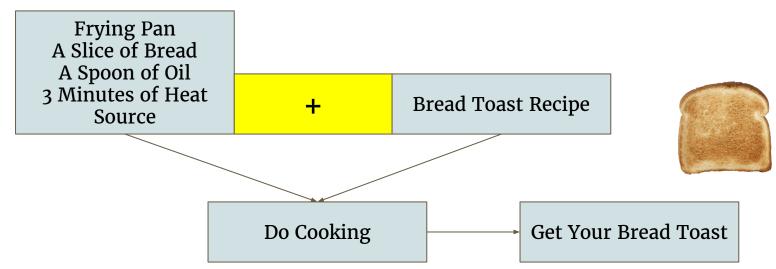
Fine Tune the Solution

Recipe to the Solution





Cook a Crunchy Bread Toast for You



Procedure to Make Bread Toast

Step 1 : Grab a loaf of bread.

Step 2: Get a pan and place it on the stove let it heat.

Step 3: Pour some oil on the pan and wait for oil to be heated.

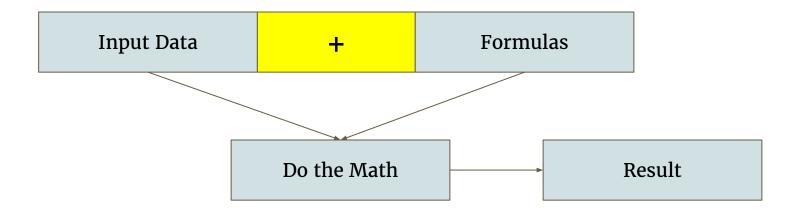
Step 4: Put a slice on the pan and roast until it become brown in shade.

Step 5: Turn the slice and roast until it become brown in shade.

Step 5 : Get the toasted bread from the pan and serve it.

Step 6: Turn off the heat source.

If a problem comes from mathematics then what we need to do?



Mathematically the Procedures is

Algorithm



Algorithm

A finite set of unambiguous instructions performed in a prescribed sequence to achieve a goal, especially a mathematical rule or procedure used to compute a desired result.

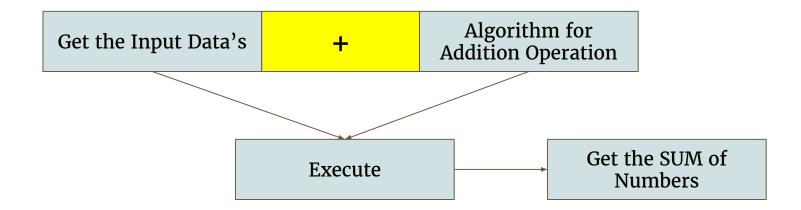
*

×

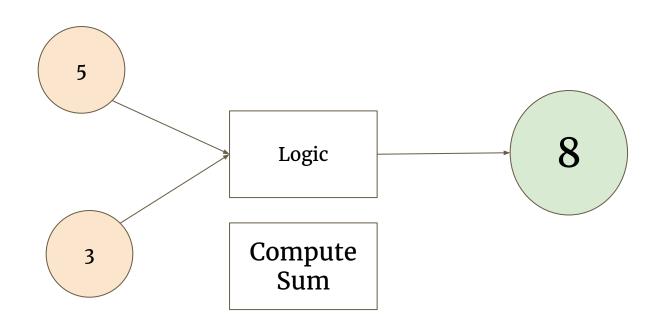
 $\dot{\mathbf{x}}$

Algorithms are the basis for most computer programming.

Simple Mathematical Problem



Simple Mathematical Problem



Addition Algorithm Human Version

Step 1: Get 2 inputs.

Step 2 :Perform addition.

Step 3: Get the Result.

Addition Algorithm Computer Version

Step 1: Get 1st Input and store.

Step 2: Get 2nd Input and store.

Step 3: Grab the stored value and perform the addition logic.

Step 4: Compute the result.

Step 5 : Store the result.

Step 6 : Display the result and exit