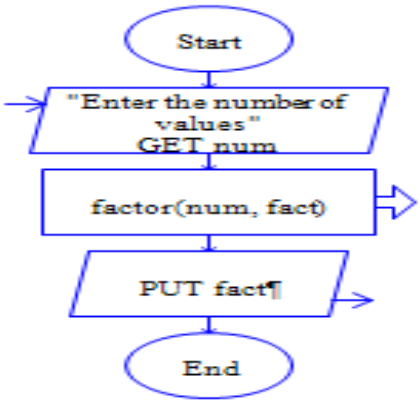
Raptor Practice Exercises

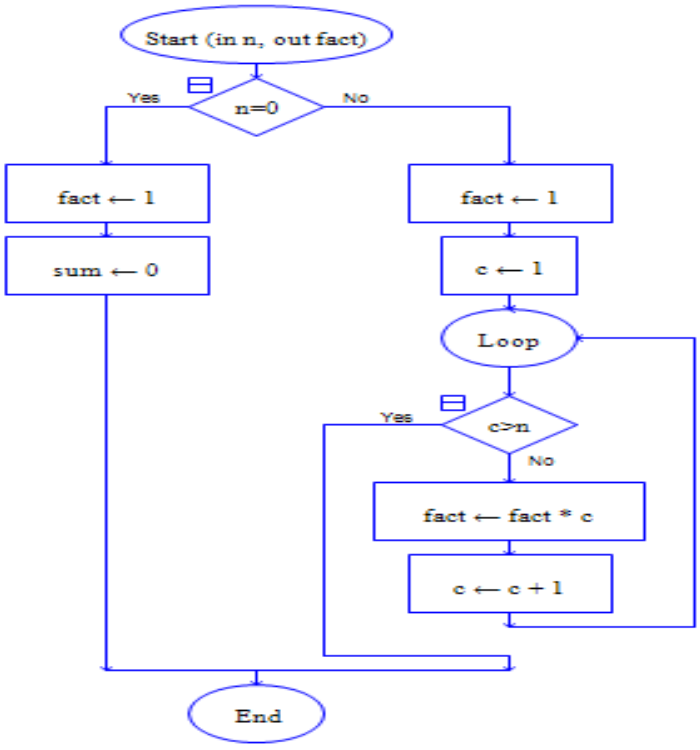
Lab 3

Factorial of a number

main | factor

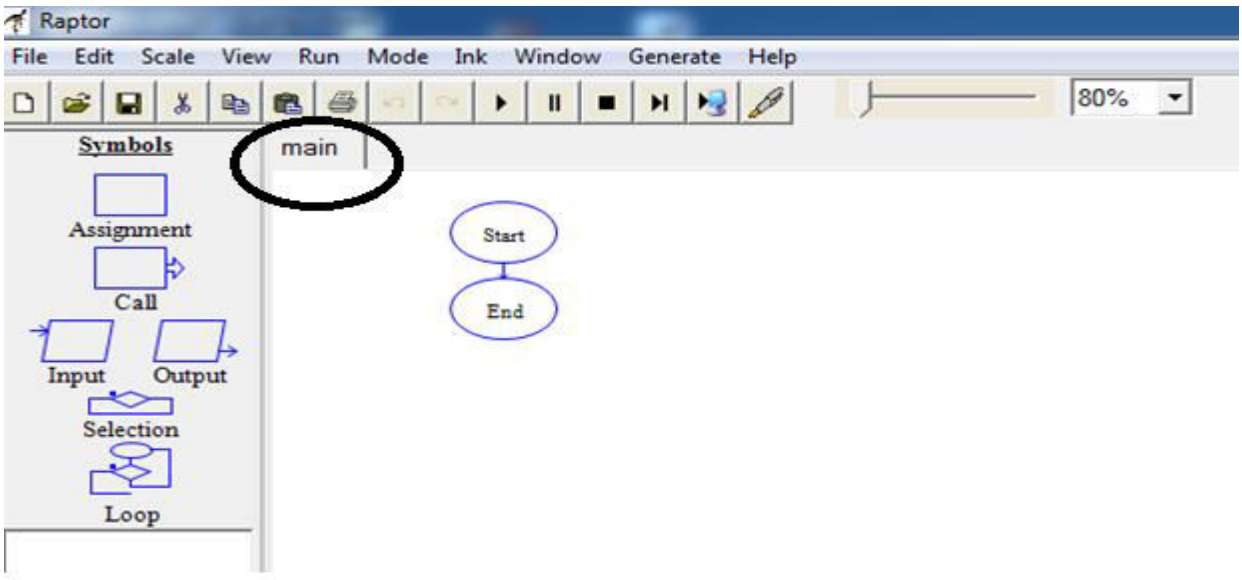


main | factor

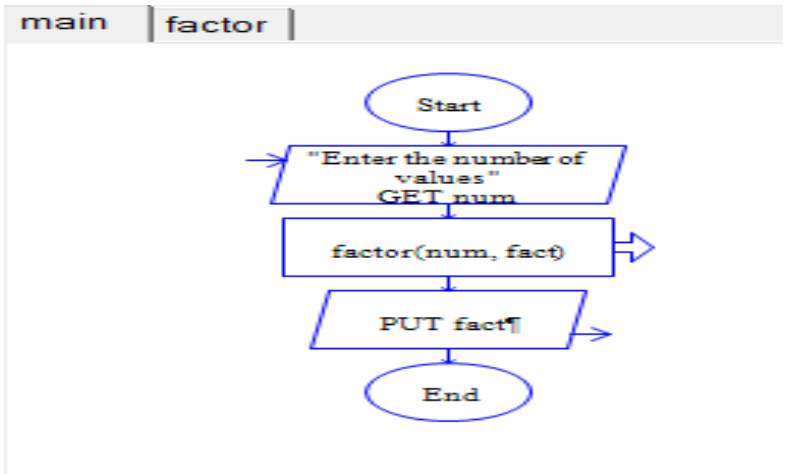


Steps:

1. **Design a raptor program as explained earlier by getting input with prompt and displaying the output with prompt in the "main".**

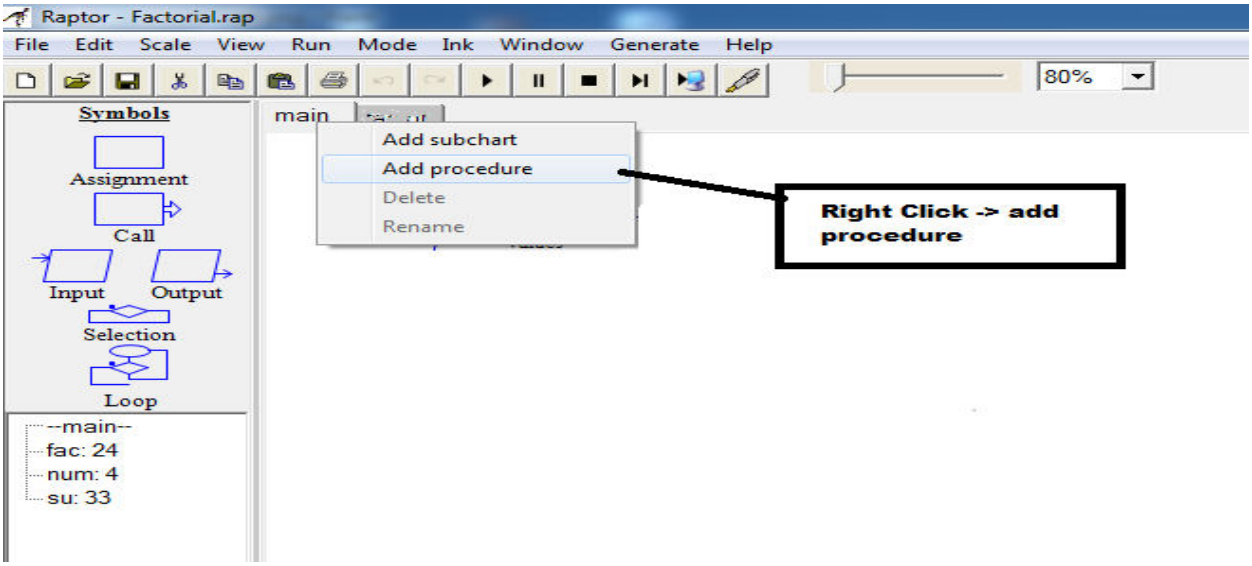


2. **Add the steps to calculate the factorial of a given number in a separate procedure as given below.**
3. **In the "main" program click the "Call" symbol to make a call to the procedure as follows.**

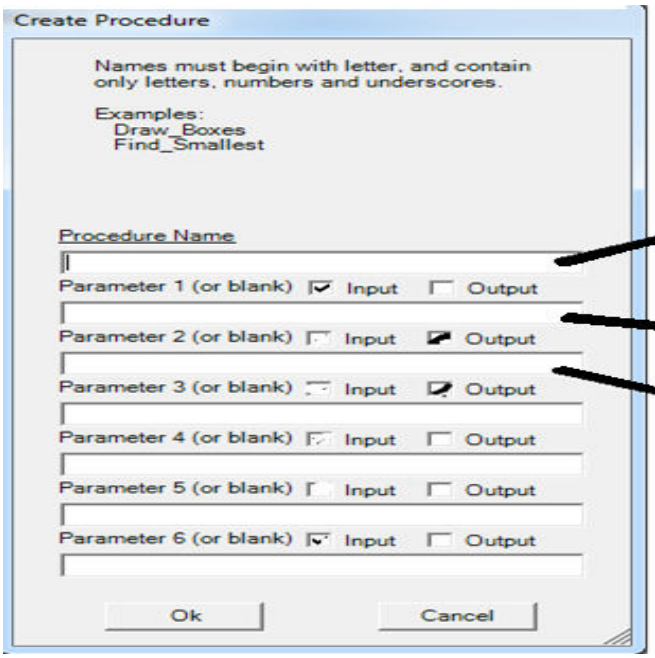


4. **Steps to create a procedure (to be called from main, which perform a specific given task)**

   a. **Right Click "main" to get the menu as shown below**



   b. **Select "add procedure" to add a new procedure. The following window will be displayed to fill the details of the procedure (procedure name, parameter(s) name and its type (input, output).**



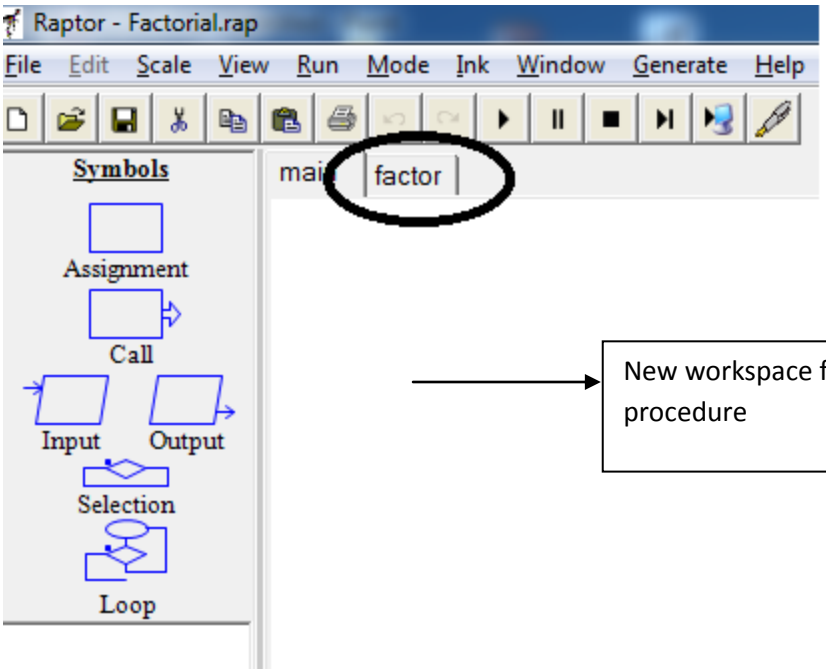
Enter the name of the procedure

Enter the first parameter as num and select the input checkbox

Enter the second parameter as fact and select the output checkbox

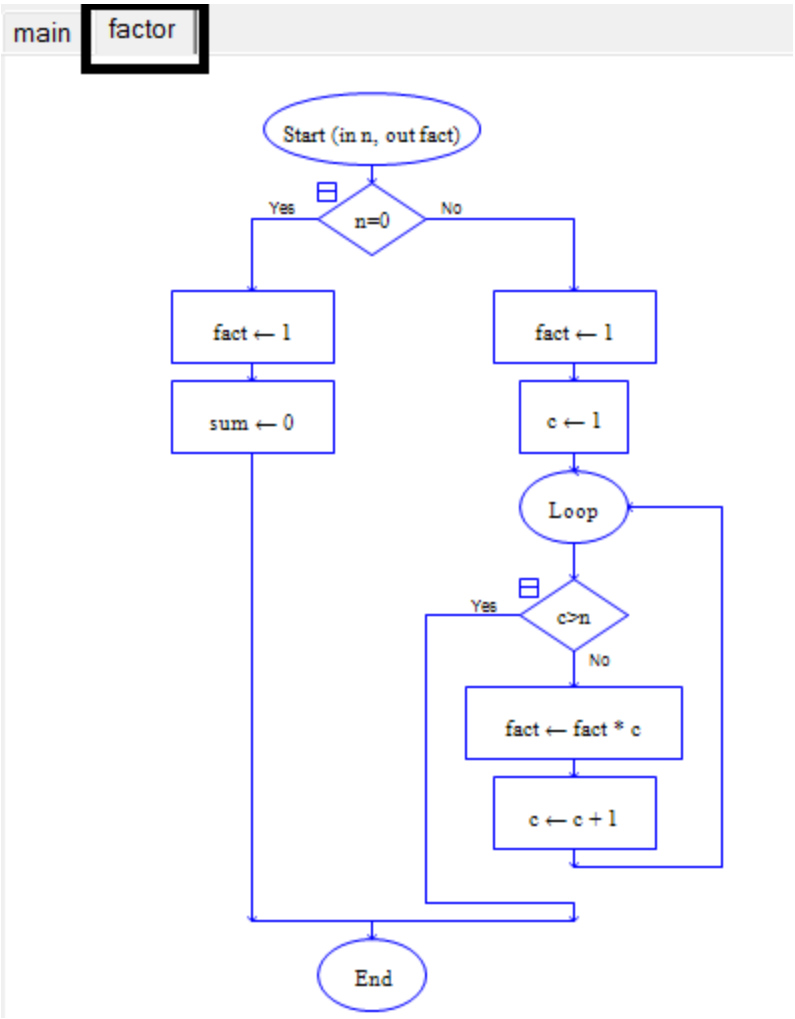
c. **Give a procedure name as "factor" (can be any valid name) and their parameters.**

d. **A new tab is added besides the main with the name "factor" and creates a new work space for creating the procedure as given below:**

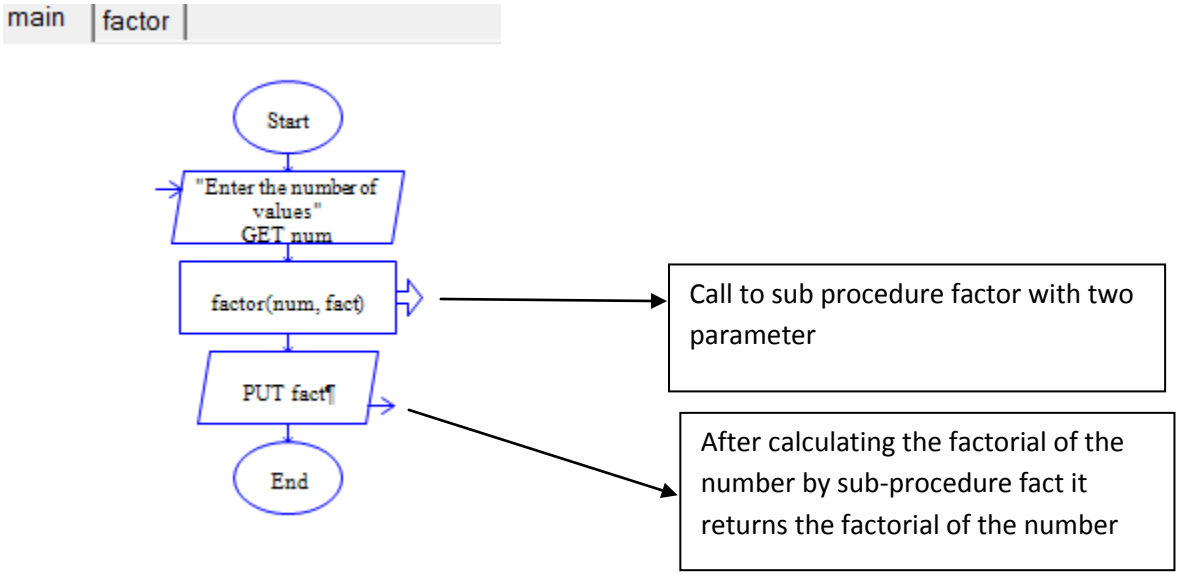


New workspace for creating sub procedure

e. **Sub procedure is created as given below for finding the factorial of a number.**

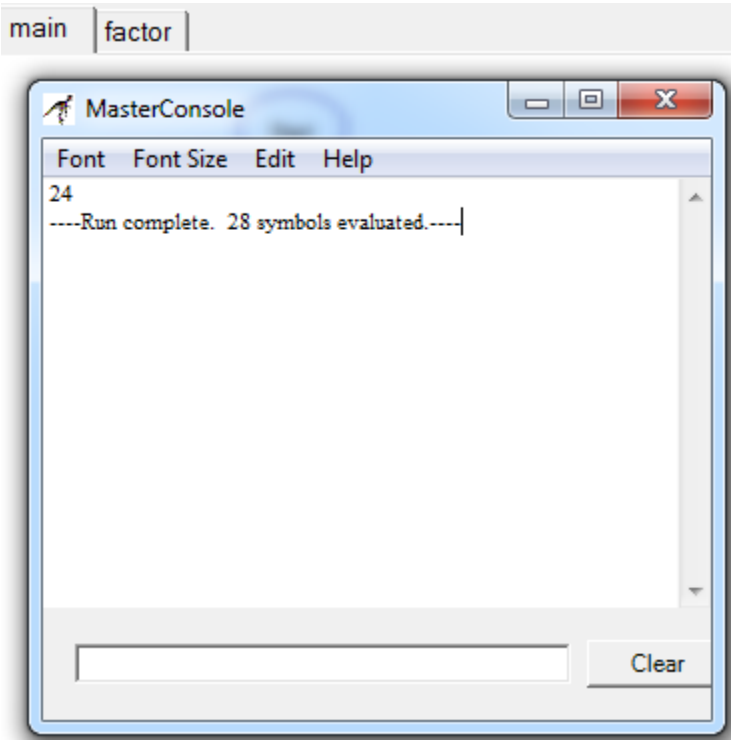


f. **In main function add "call" block after input block as given below.**

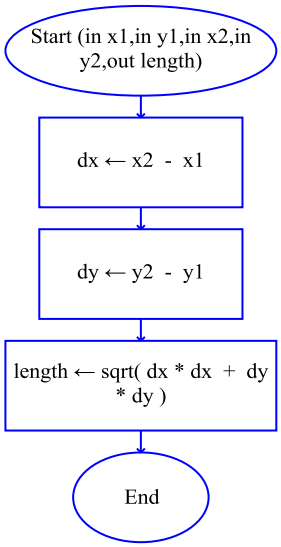


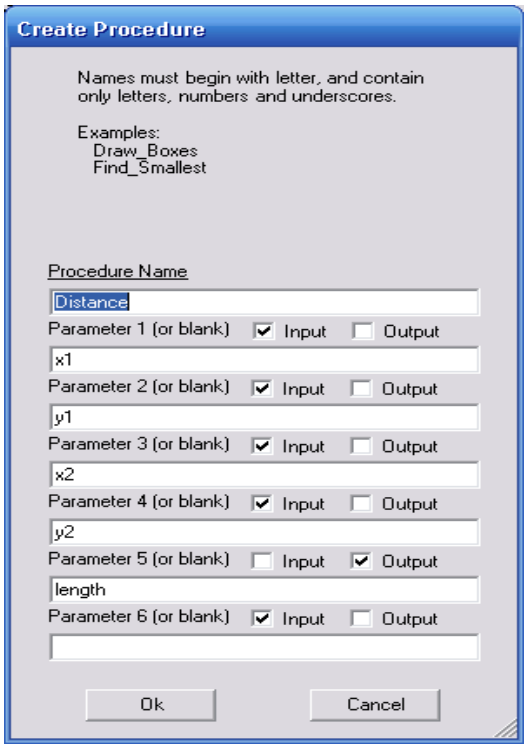
g. Run file

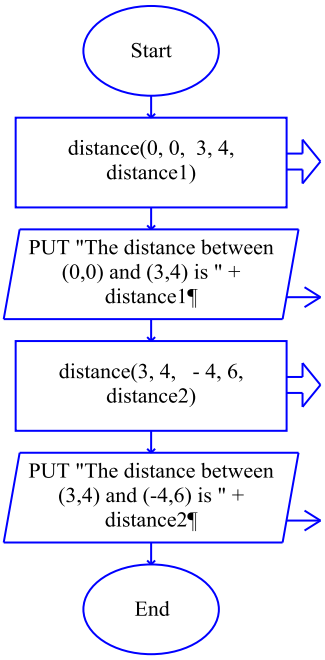
Executing the Raptor file will result with the output as given below



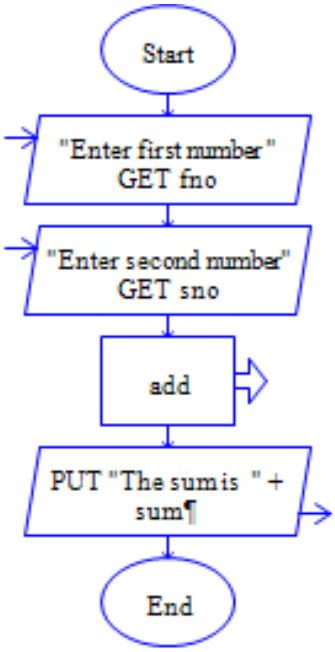
2. Finding the distance between two given points using procedure

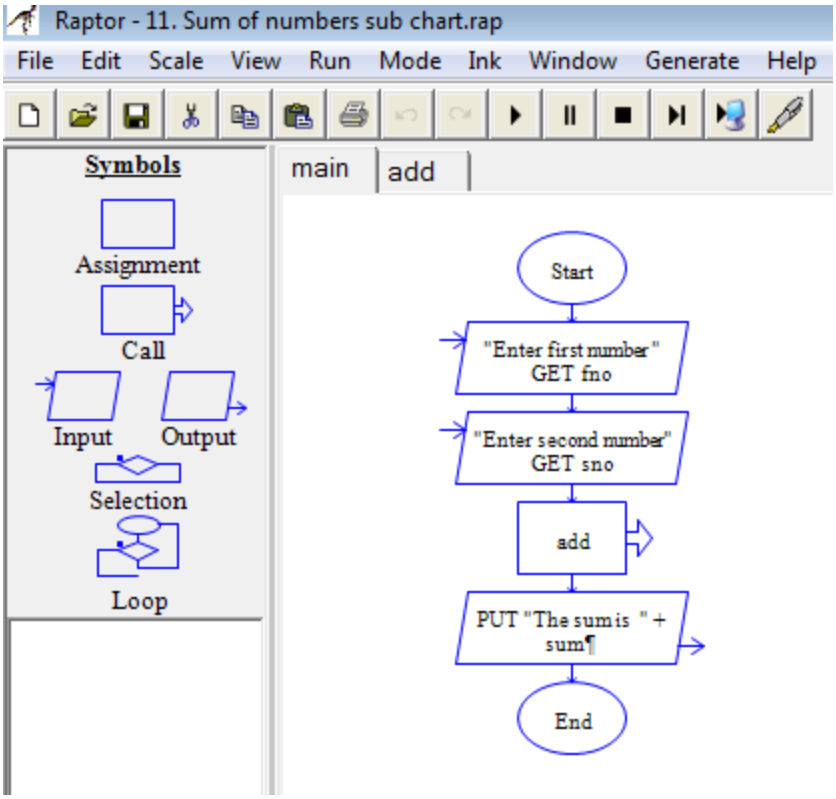


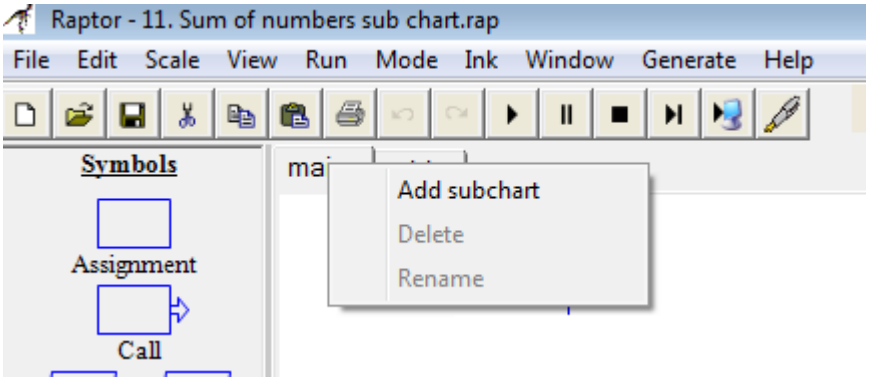


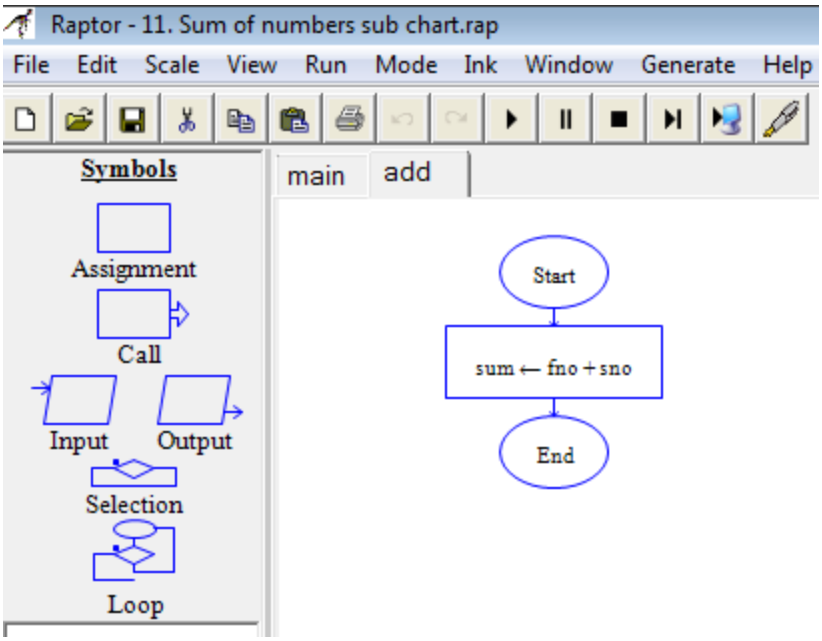


3. Sum of two numbers using Sub chart




Raptor - 11. Sum of numbers sub chart.rap
File Edit Scale View Run Mode Ink Window Generate Help
Symbols
Assignment
Call
Input
Output
Selection
Loop
main
add
Start
"Enter first number"
GET fno
"Enter second number"
GET sno
add
PUT "The sum is " +
sum¶
End


Raptor - 11. Sum of numbers sub chart.rap
File Edit Scale View Run Mode Ink Window Generate Help
Symbols
Assignment
Call
Add subchart
Delete
Rename



Take Home Questions

1. To write a function 'prime' that checks whether a number is prime or not. Pass two arguments one being the number which is to be checked and the other being the argument which stores 1 or 0 indicating whether the number is prime or not respectively. Pass the arguments using pointers. Make the modifications on the second argument in the called function. Printing of the result should take place in the calling function.

2. Write a program, to perform all the integer arithmetic operations with the help of separate user defined functions to which the 2 operands are passed as the argument. Implement the program in such a way that the user should be able to perform any operation, any number of times as long as he wishes to do so.