# ICT1142 – Programming Practicum

**Tutorial 02** **Level 1 Semester 1 | 2022**

1. Describe the steps in problem solving process?

2. What is an algorithm?

3. Draw flow-charts and pseudo codes for the following problems.

   i. Print Welcome to Ruhuna University
   ii. Calculate the perimeter and area of the rectangle given the length and the width

4. Following program contains basic structure of C code .Explain meaning of each line?

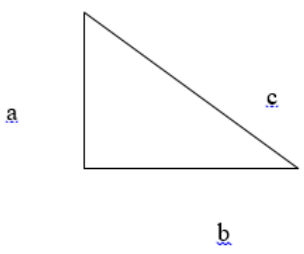
```
Line1  // program to print the "Welcome to Ruhuna"
Line2   #include <stdio.h>
Line3      int main()
Line4         {
Line5          printf("Welcome to Ruhuna\n");
Line6      return 0;
Line7       }
```

5. Explain advantages of using IDE (Integrated Development Environment) tools.

6. What are the differences between high level language and low level language? Give some examples.

7. Develop an algorithm to input hour's work and hourly rate through the keyboard and print the salary.

8. Write a pseudo code to calculate the hypotenuse (Length c) of a right angled triangle given the other two lengths. Convert your pseudo code into the C program.(Hint: you can use sqrt() function defined in math.h header file, double sqrt(double x)→returns square root of x)



9. Show the value of x after each statement is performed.

   i. x=7+3*6/2-1;
   ii. x=2%2+2*2-2/2;
   iii. x=(3*9*(3+(9*3/(3)));
   iv. x = 10 % 3 * 4 + 5 * 2;
   v. x = 7.0 / 4.0;
   vi. x = 7.0 / 4;

10. Write a program that asks the user to enter two numbers obtains them from the user and prints their sum, product, difference, quotient and remainder.