**214189E – SENARATHNA G.G.P.C.**

**Function in C.**

**Exercises:**

**01)**

//Call by value.  
#include <stdio.h>  
  
int multi(int x,int y); // function prototype, also called function declaration.  
  
int main() { // // main function, program starts from here.  
 int m,n;  
 printf("Enter two numbers:\n");  
 scanf("%d%d", &m,&n);  
  
 printf("Multiplication of two integer numbers:%d", multi(m,n));  
}  
  
int multi(int x,int y) { // function definition.  
 int multi = x \* y;  
 return multi;  
}  
  
//Call by reference.  
  
/\*#include <stdio.h>  
  
int multi(int \*x,int \*y);  
  
int main() {  
 int m,n;  
 printf("Enter two numbers:\n");  
 scanf("%d%d", &m,&n);  
  
 printf("Multiplication of two integer numbers:%d", multi(&m,&n));  
}  
  
int multi(int \*x,int \*y) {  
 int multi = \*x \* \*y;  
 return multi;  
}\*/

**02)**

//Call by value.  
#include <stdio.h>  
  
int sumOfSquare(int x,int y); //function prototype, also called function declaration.  
  
int main() { //main function, program starts from here.  
 int a,b;  
 printf("Input two numbers:\n");  
 scanf("%d%d", &a,&b);  
  
 printf("sum of squares of two numbers:%d", sumOfSquare(a,b));  
}  
  
int sumOfSquare(int x,int y) { //function definition.  
 int sumOfSquare = x\*x + y\*y;  
 return sumOfSquare;  
}  
  
//Call by reference.  
/\*#include <stdio.h>  
  
int sumOfSquare(int \*x,int \*y);  
  
int main() {  
 int a,b;  
 printf("Input two numbers:\n");  
 scanf("%d%d", &a,&b);  
  
 printf("sum of squares of two integer numbers:%d", sumOfSquare(&a,&b));  
}  
  
int sumOfSquare(int \*x,int \*y) {  
 int sumOfSquare = (\*x)\*(\*x) + (\*y)\*(\*y);  
 return sumOfSquare;  
}\*/

**03)**

//Call by value.  
#include <stdio.h>  
  
double triangleArea(double x,double y); //function prototype, also call function declaration.  
  
int main() { //main function,program start from here.  
 double a,b;  
 printf("Input the base and height of a triangle:\n");  
 scanf("%lf%lf", &a,&b);  
  
 printf("Area of triangle:%lf", triangleArea(a,b)); //function call.  
}  
  
double triangleArea(double x,double y) { //function definition.  
 double triangleArea = 0.5 \* x \* y;  
 return triangleArea;  
}

**04)**

#include <stdio.h>  
  
int fact(int x); //function prototype, also called function declaration.  
  
int main() { //main function, program start from here.  
 int num;  
 printf("Input the number:\n");  
 scanf("%d", &num);  
  
 printf("factorial value is %d", fact(num)); // function call.  
}  
  
int fact(int x) { //function definition.  
 int mul = 1;  
 for(int i = 1;i <= x;i++) {  
 mul = mul \* i;  
 }  
 return mul;  
}

**05)**

#include <stdio.h>  
  
int Fibo(int x);  
int main() {  
 int num;  
 printf("Input the number:");  
 scanf("%d", &num);  
  
 Fibo(num);  
}  
int Fibo(int x) {  
 int Fibo;  
 if(x == 0) {  
 printf("0");  
 return Fibo;  
 }else if(x == 1) {  
 printf("0 1");  
 return Fibo;  
 }else {  
 printf("0 1");  
 int a = 0,b = 1;  
 for(int i = 1;i < x;i++) {  
 Fibo = a + b;  
 printf("% d", Fibo);  
 a = b;  
 b = Fibo;  
 }  
 return Fibo;  
 }  
}

**06)**

#include <stdio.h>  
  
float CelciTOFahren(int x);  
  
int main() {  
 float temp\_C;  
 printf("Enter the temperature in Celsius value:\n");  
 scanf("%f", &temp\_C);  
  
 printf("The temperature in Fahrenheit value:%.2f", CelciTOFahren(temp\_C));  
}  
  
float CelciTOFahren(int x) {  
 float CelciTOFahren = x \* 9/5 + 32;  
 return CelciTOFahren;  
}