**Programming 2**

**Assignment 3**

1. **Using functions, write the corresponding full C++ program to finds the factorial of n.**

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1. **Using functions, develop a full C++ program that asks the user for his choics:1 or 2. If the choice is 1, then your program will convert the entered Fahrenheit (F°) temperature to Celsius (C°). If the choice is 2, then your program will convert the entered Celsius (C°) temperature to Fahrenheit (F°). The conversion relationships are:**  *F°= (9/5) \* C° + 32* **for the function convertToF,** *C°= (5/9) \* (F° - 32)* **for the function *convertToC*.**

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1. **Using functions, write the corresponding full C++ programme to Find the average of two numbers using the sum function of two numbers.**

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1. **The following main program prompts the user to input a character and outputs a message stating whether the entered character is a vowel or not. Write a function isVowel that fulfils the purpose of this program.**

**(vowels are: a, e, i, o, u)**

#include<iostream>

using namespace std;

bool isVowel(char ch);

int main()

{

char ch;

bool value;

cout<<"Enter A Character : ";

cin>>ch;

value=isVowel(ch);

if(value)

cout<<"\n This character is Vowel."<<endl;

else

cout<<"\n This is NOT a Vowel."<<endl;

return 0;

}



1. **Show the screen output and trace the memory content for the following program - consider that num takes the following values { 2, 5, 0}**



#include<iostream>

Enter a few numbers to find their product or enter 0 to stop: *2 ∇ 5 ∇ 0*

using namespace std;

int prod(int a, int b, int& count);

int main( )

{

int num, nTimes;

int numProd;

cout<<"Enter a few numbers to find their”

numProd = 10

prod(2,5,1)

main()

prod(2,5,1) : 10

**fn main**

**fn prod**

***memory***

<<” product or enter 0 to stop: ";

cin>>num;

numProd=num;

nTimes=1;

while (cin)

{

cin>>num;

if (num==0)

break;

numProd=prod(numProd,num, nTimes);

}

cout<<"\n The product of the entered "

<<nTimes<<" numbers is "<<numProd

<<endl<<endl;

return 0;

}

int prod(int a, int b, int& count)

{

count++;

return a\*b;

}

**Answer**

1. **Output :**

**“The product of the entered 2 numbers is 10”**