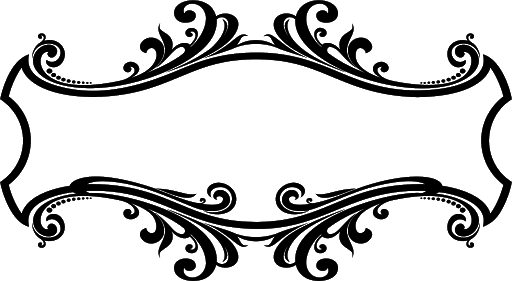


DELHI SKILL AND ENTERPRENEURSHIP UNIVERSITY

SESSION 2021-22

SUBJECT:-

Programming in C++



PRACTICAL FILE



COURSE :- BCA-1A

ROLL NO :- 41221139

SUBMITTED BY :- SUBMITTED TO:-

Sachin Rajbhar Ms. Komal Dhingra

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Experiment 1

**Aim:** To find the largest among three numbers.

**Software used:** Vs Code

**Program:**

#include <iostream>

using namespace std;

int largest\_3no(int a, int b, int c);

int main(){

    int a,b,c,largest;

    cout<< "Enter three numbers\n";

    cin>>a>>b>>c;

    largest= largest\_3no(a,b,c);

    cout<< "The largest no is "<<largest;

    return 0;

}

int largest\_3no(int a, int b, int c){

    int largest;

    if(a>=b && a>=c){

        largest=a;

    }

    else if(b>=a && b>=c){

        largest=b;

    }

    else{

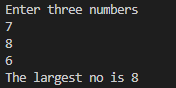
        largest=c;

    }

    return largest;

}

**Output:**



Experiment 2

**Aim:** To read marks in 3 subjects and print them

**Software used:** Vs Code

**Program:**

#include <iostream>

using namespace std;

int main(){

    int s1,s2,s3;

    cout<<"Enter the 3 subjects marks\n";

    cin>>s1>>s2>>s3;

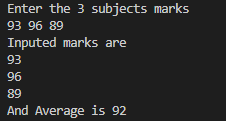
    cout<<"Inputed marks are\n"<<s1<<endl<<s2<<endl<<s3;

    cout<<"\nAnd Average is "<<(s1+s2+s3)/3;

    return 0;

}

**Output:**



Experiment 3

**Aim:** An election is contested by five candidates. The candidates are numbered 1 to 5 and the voting is done by marking the candidate number on the ballot paper. Write a program to read the ballots and count the votes cast for each candidate using an array variable count. In case, a number read is outside the range 1 to 5, the ballot should be considered as a 'spoilt ballot', and the program should also count the number of spoilt ballots.

**Software used:** Vs Code

**Program:**

#include <iostream>

using namespace std;

int main()

{

    int a[6]={0,0,0,0,0,0};

    int vote;

    char ch;

    do{

        cout<<"Enter the candidate no. from 1 to 5 ";

        cin>>vote;

        switch(vote){

        case 1: a[1]++; break;

        case 2: a[2]++; break;

        case 3: a[3]++; break;

        case 4: a[4]++; break;

        case 5: a[5]++; break;

        default: a[0]++;

        }

        cout<<"Do want to continue(y/n)? ";

        cin>>ch;

    }while(ch!='n');

    cout<<"\nTotal votes are:-g";

    for(int i=0;i<=5;i++)

    {

        if(i==0)

            cout<<"\nSpoiled votes: "<<a[0];

        else

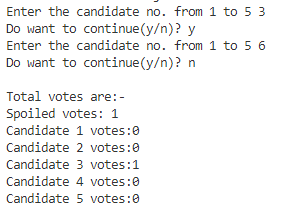
            cout<<"\nCandidate "<<i<<" votes:"<<a[i];

    }

    return 0;

}

**Output:**



Experiment 4

**Aim:** To understand the concept of reference variable(alias)

**Software used:** Vs Code

**Program:**

#include <iostream>

using namespace std;

int main()

{

    int sum=10;

    int &total=sum; //total is reference variable(alias) of sum

    sum=30;

    cout<<sum;

    cout<<endl<<total;

    total=20;

    cout<<endl<<sum<<endl<<total;

    return 0;

}

**Output:**



Experiment 5

**Aim:** To swap two numbers using reference variable

**Software used:** Vs Code

**Program:**

#include <iostream>

using namespace std;

int swap(int &a, int &b);

int main()

{

    int x,y;

    cin>>x>>y;

    swap(x,y);

    cout<<x<<endl<<y;

    return 0;

}

int swap(int &a, int &b) //swap using reference variable

{

    int temp;

    temp=a;

    a=b;

    b=temp;

    return 0;

}

**Output:**



Experiment 6

**Aim:** To covert Decimal to Binary

**Software used:** Vs Code

**Program:**

#include <iostream>

using namespace std;

int i,j;

int main(){

    int num,a[50];

    cout<<"Enter a Decimal number ";

    cin>>num;

    for(i=0;num!=0;i++)

    {

        a[i]=num%2;

        num=num/2;

    }

    cout<<"The Binary equivalent is ";

    for(j=i-1;j>=0;j--)

    {

        cout<<a[j];

    }

    return 0;

}

**Output:**



Experiment 7

**Aim:** To covert Decimal to Hexadecimal

**Software used:** Vs Code

**Program:**

#include<iostream>

using namespace std;

//convert decimal to hexadecimal

void convert(int num) {

   char arr[100];

   int i = 0;

   while(num!=0) {

      int temp = 0;

      temp = num % 16;

      if(temp < 10) {

         arr[i] = temp + 48;

         i++;

      } else {

         arr[i] = temp + 55;

         i++;

      }

      num = num/16;

   }

   for(int j=i-1; j>=0; j--)

   cout << arr[j];

}

int main() {

   int num;

   cout<<"Enter a decimal number ";

   cin>>num;

   cout<<num<< " converted to hexadeciaml: ";

   convert(num);

   return 0;

}

**Output:**



Experiment 8

**Aim:** To allocate array dynamically, read elements, print them & delete the dynamic array

**Software used:** Vs Code

**Program:**

#include <iostream>

using namespace std;

int main(){

    int num;

    cout<<"Enter the size of array ";

    cin>>num;

    float \*ptr=new float[num];

    cout<<"\nEnter the elements of array ";

    for(int i=0;i<num;i++)

    {

        cin>>\*(ptr+i);

    }

    cout<<"\nElements of the array are: ";

    for(int i=0;i<5;i++)

    {

        cout<<\*(ptr+i)<<"\t";

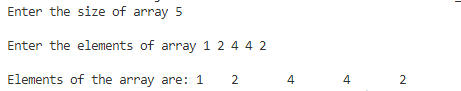
    }

    delete []ptr;

    return 0;

}

**Output:**



Experiment 9

**Aim:** To understand Manipulators

**Software used:** Vs Code

**Program:**

#include <iostream>

#include <iomanip>

using namespace std;

int main(){

    int num=2500;

    float pi=3.141;

    cout<<endl<<endl<<endl;

    cout<<setw(5)<<num<<"\n"; //\_\_2500

    cout<<setfill('X')<<setw(6)<<num<<"\n"; //XX2500

    cout<<setprecision(3)<<pi<<"\n"; //3.14 i.e total 3 digits

    cout<<fixed<<setprecision(3)<<pi<<"\n"; //3143 i.e 3 digits after decimal

    cout<<hex<<num<<"\n";

    cout<<oct<<num<<"\n";

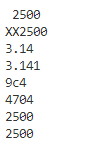
    cout<<dec<<num<<"\n";

    cout<<setbase(2)<<num<<"\n";

    return 0;

}

**Output:**



Experiment 10

**Aim:** To find the total of the series 1+ x + (x^2)/2 + (x^3)/3...nth term is

**Software used:** Vs Code

**Program:**

#include <iostream>

#include <cmath>

using namespace std;

int main(){

    int x,n,sum=1;

    cout<<"Enter value of x and nth term: ";

    cin>>x>>n;

    for(int i=1;i<=n;i++)

    {

        sum=sum+(pow(x,i)/i);

    }

    cout<<"The total of the series 1+ "<<x<<" + ("<<x<<"^2)/2 + ("<<x<<"^3)/3..."<<n<<"th term is "<<sum;

    return 0;

}

**Output:**

