

BABASAHEB BHIMRAO AMBEDKAR BIHAR UNIVERSITY

PRACTICAL REPORT

BCA – 306

LAB ON C++

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Q1. Write a Program in C++ to Print "Hello world".

```
=> #include <comio.h>
#include <iostream.h>
void main()
{
    cout<<"Hello world";
    getch();
}
```

O/P -> Hello world.

Q2. Write a C++ Program to INPUT 5 Subject marks then Print total marks and Percentage.

```
=> #include <iostream.h>
#include <comio.h>
void main()
{
    int a,b,c,d,e,T,P;
    cout<<" Enter 5 subject marks:-";
    cin>>a>>b>>c>>d>>e;
    T = a+b+c+d+e;
    P = T/5;
    cout<<" Total marks = "<<T << endl;
    cout<<" Percentage = "<<P;
```

getch();

X

Q1P → enter 5 subject marks:-

95 ↳

70 ↳

62 ↳

74 ↳

82 ↳

Total marks = 383

percentage = 76

Q3. Write a Program to Input two numbers and Swap it.

```
⇒ #include <iostream.h>
#include <conio.h>
void main()
{
    int a, b, Temp;
    clrscr();
    cout << " Enter two numbers:- ";
    cin >> a >> b;
    cout << " a = " << a << " b = " << b << endl;
    cout << " After Swap values are:- ";
    Temp = a;
    a = b;
    b = Temp;
    cout << " a = " << a << " b = " << b;
    getch();
}
```

Q1P → Enter two numbers :- 30 ↗

25 ↗

a = 30 b = 25

After Swap values are :-

a = 25 b = 30.

Q4. Input two number in C++ Program and Print bigger one.

```
#include <iostream.h>
#include <conio.h>
class number
{
private:
    int a, b;
public:
    void Input()
    {
        cout << "Enter two numbers";
        cin >> a >> b;
    }
    void compl()
    {
        if (a > b)
            cout << "bigger = " << a;
        else
            cout << "bigger = " << b;
    }
};

void main()
```

```

X
number n;
n.INPUT();
n.COMPU();
getch();

```

X

Q1P → Enter two numbers:- 30 ↴

-20 ↴

bigger = 30.

Q5. Write a program in C++ to add value of two variable using class & object.

⇒ #include <iostream.h>

#include <conio.h>

class add

X

private:

int a,b;

public:

void sum()

X

cout<< "Enter two numbers:-";

cin>>a>>b;

cout<< "Sum = " << a+b;

X

-x;

void main()

x

```
add(a);
a.sum();
getch();
```

x

Q1P → Enter two numbers:- Q ↴

3 ↴

sum = 3

Q6. Write a Program to Input Number
then Print its table.

```
⇒ #include <conio.h>
#include <iostream.h>
class table
x
```

Private:

int m;

Public:

void print()

x

int i;

cout << "enter any number:-"

cin >> m;

for (i = 1; i <= 10; i++)

x

cout << m * i << endl;

x

x; x

Void main()

x

```
table t;
t.print();
fetch();
```

x

O/P -> Enter any number:- 10 ↴

10

20

30

40

50

60

70

80

90

100

Q7. Write a program in C++ to print
ascii value or input character.

⇒ #include <iostream.h>

#include <conio.h>

class Ascii

x

Private:

Char m;

Public:

```

void print()
{
    cout << " enter character: ";
    cin >> m;
    cout << int(m);
}

void main()
{
    ascii a;
    a.print();
    getch();
}

```

O/P → enter character:- A ↵
65.

- Q8. Write a program to input number
and print its Factorial.

```

⇒ #include <iostream.h>
#include <conio.h>
class Factorial
{
private:
    int P;
public:
    void Show()
    {
        cout << " enter number: ";
    }
}

```

```

cin >> P;
int i, f = 1;
for (i = 1; i <= P; i++)
{
    f = f * i;
}
cout << "Factorial = " << f;
}
void main()
{
    Factorial f;
    f.Print();
    getch();
}

```

O/P → Enter number :- 5
 Factorial = 120

Q8. Write a Program to Print the Series
 $0, 4, 8, 12, 16, \dots, n$.

```

⇒ #include <iostream.h>
#include <conio.h>
class series
{
private:
    int l, j;
public:
    void Print()

```

x

cout << " Enter last limit";

cin >> l;

for (i = 0; i <= l; i += 4)

x

cout << i << ",";

x

x

x;

void main

x

series s;

s << endl;

s << endl;

getch();

x

Q1P → Enter last limit 30 ↴

0, 4, 8, 12, 16, 20, 24, 28

10. write a program in C++ to convert feet into inches using scope resolution operator (::)

⇒ #include <iostream.h>

#include <conio.h>

class convert

x

private :

float f, i;

```

Public:
    void conv();
}
Void convert::conv()
{
    cout<<" enter value in feet";
    cin>>f;
    i=f*12;
    cout<<" value in inches = " << i;
}

void main()
{
    convert c;
    c.conv();
    c.conv();
    getch();
}
  
```

O/P -> Enter value in feet :- 5
 value in Inches = 60.

11. Write a program to print product of 3 numbers using Scope resolution operator (::)

```

→ #include <iostream.h>
#include <conio.h>
class Product
{
    Private:
        
```

```

int a,b,c,P;
public:
    void mul();
};

void Product::mul()
{
    cout<<"Enter three numbers:-";
    cin>>a>>b>>c;
    P = a * b * c;
    cout<<"Product = "<<P;
}

void main()
{
    Product P;
    P.mul();
    getch();
}

```

OR → Enter three numbers:- 3 ↴

5 ↴

10 ↴

Product = 150 -

12. Write a program to input 4 float values and print its Sum and Average:

```

⇒ #include <iostream.h>
#include <conio.h>
class Sumavg
{

```

Private:

float a,b,c,d,S,avg;

Public:

void calc();

x

cout << " Enter 4 float values";

cin >> a >> b >> c >> d;

S = a + b + c + d;

avg = S / 4;

cout << " sum = " << S << endl;

cout << " average = " << avg;

x

x;

void main()

x

sumavg S;

S. calc();

getch();

x

O/P -> Enter 4 float values:- 4.6 ↴

5.4 ↴

2.3 ↴

3.4 ↴

Sum = 15.7

Average = 3.925

13. Write a C++ Program to demonstrate the use of default constructor.

```
#include <iostream.h>
#include <conio.h>
class cons
{
private:
    int a,b,c;
public:
    cons()
    {
        a = 1;
        b = 3;
        c = 5;
    }
    void sum()
    {
        cout << " Sum = " << a+b+c;
    }
};

void main()
{
    cons c;
    c.sum();
    getch();
}
```

O/P -> Sum = 9.

17. Write a program to demonstrate the use of parametrized constructor.

```

⇒ #include <iostream.h>
#include <conio.h>
class cons
{
    private :
        int a, b;
    public :
        cons (int x, int y)
        {
            a = x;
            b = y;
        }
        void product()
        {
            cout<<"product = "<<(a * b);
        }
};

void main()
{
    cons c(2, 5);
    c.product();
    getch();
}

```

O/P → Product = 10

15. Write a program to demonstrate the use of copy constructor.

⇒ #include <iostream.h>

#include <conio.h>

class Cons

 X

private:

 int x;

public:

 Cons(Cons obj)

 X

 x = obj.x;

 X

 void Input()

 X

 cout << "enter any number:-"

 cin >> x;

 X

 X;

 void main()

 X

 Cons c;

 c.Input();

 Cons d(c);

 getch();

 X

O/P -> enter any number 5 ↴

Q16 Write a program to use all the types of constructor in a single program.

```
=> #include <iostream.h>
#include <conio.h>
class cons
{

```

Private :

```
        int code;
```

Public :

 cons()

```
        code = 101;
```

```
        cons(int a)
```

```
        code = a;
```

```
        cons(cons & obj)
```

```
        code = obj.code;
```

```
    void display()
```

```
        cout << " code = " << code << endl;
```

```
    };
```

```
void main()
```

```
    code <<
```

```

    code.y(101)
    code.z(y);
    x.display();
    y.display();
    z.display();
    getch();
}

```

Q1P \rightarrow code = 101
 code = 101
 code = 101

17. Write a program in C++ to demonstrate the use of Destructor.

```

 $\Rightarrow$  #include <iostream.h>
#include <conio.h>
class dest
{
private:
    int x,y;
public:
    void input()
    {
        cout << " Enter two number ";
        cin >> x >> y;
        cout << " sum = " <x+y <endl;
    }
    ~dest()
    {
    }
}

```

```

cout << "Thank you";
>
>;
void main()
{
    int a;
    a = input();
    getch();
}

```

O/P -> enter two number 5
 6

Sum = 11

Thank you.

18. Write a program in C++ to input radius of circle and print its area and circumference:

```

#include <iostream.h>
#include <conio.h>
class Circle
{
private:
    float r, ar, c;
public:
    void calc()
    {
        cout << "Enter radius of circle";
        cin >> r;
    }

```

```

C = 2 * 3.14 * r;
ar = 3.14 * r * r;
cout << " area = " << ar << endl;
cout << " circumference = " << C;
X
r;
void main()
X
circle c;
c.set();
c.cal();
getch();
X
    
```

O/P → enter radius of circle :- 3.14
area = 30.5648
circumference = 19.468 -

- Q. Write a program in C++ to print the series :- 50, 45, 40, ..., 5.

```

⇒ #include <conio.h>
#include <iostream.h>
class Series
X
public:
void Print()
X
int i;
for (i = 50; i >= 5; i -= 5)
    
```

```

    <
    cout << i <" , " ;
    >
    >;
void main()
    <

```

```

Series S;
S.print();
getch();
    >

```

O/P → 50, 45, 40, 35, 30, 25, 20, 15, 10, 5

Q. Write a program to count total number
b/w 0 to 100 which is divisible by 6.

⇒ #include <iostream.h>
#include <conio.h>

class count

->

private:

int c;

public:

count()

<

c = 0;

>

void show()

<

```
int i;
for (i = 0; i <= 100; i++)
    x
```

```
if (i % 6 == 0)
    x
```

```
    count++;
    x
```

x

Count<<"Total number between
0 to 100 which is divisible
by 6 = " <<c;

x

x;

void main()

x

count c;

c.show();

getch();

x

O/P → Total number between 0 to 100
which is divisible by 6 = 16.

Q1. write a program in C++ to demonstrate
the use of Single Inheritance

⇒ #include <iostream.h>

#include <conio.h>

class Sum

x

```
public:  
    int x,y;  
    void get()  
    {  
        cout<<"Enter two numbers:-";  
        cin>>x>>y;  
    }  
  
class output: public sum  
{  
public:  
    void show()  
    {  
        cout<<"Sum = "<<x+y;  
    }  
};  
  
void main()  
{  
    output o;  
    o.get();  
    o.show();  
    getch();  
}
```

O/P → Enter two numbers:- 54
62
Sum. 11

Q9. Write a Program in C++ to demonstrate the use of multiple Inheritance.

⇒ #include <iostream.h>

#include <conio.h>

class input

public:

 int a, b;

 void get()

 cout << "Enter two numbers:-";

 cin >> a >> b;

class process

public:

 int c;

 void product()

 c = a * b;

class output : public input, public process

public:

 void Show()

 cout << "Product = " << c;

void main()

x

```
    output S;
    S.get();
    S.Product();
    S.show();
    getch();
```

x

O/P → enter two numbers:- 6 ↴

4 ↴

Product = 24.

Q3. Write a Program in C++ to demonstrate the use of Multilevel Inheritance.

⇒ #include <iostream.h>

#include <conio.h>

class input

x

public:

int a, b; c;

void get()

x

cout << "enter two numbers:- "

cin >> a >> b;

x

x;

class process: public input

x

```

public:
    void sub()
{
    c = a - b;
}

```

Class Output : Public Process

```

public:
    void show()
{
    cout << "Subtract = " << c;
}

void main()
{
    output a;
    cin >> a;
    a. sub();
    a. show();
    getch();
}

```

O/P -> enter two numbers :- 9
5
Subtract = 4

Q4. Write a Program In C++ to demonstrate the use of Hierarchical Inheritance

```
#include <iostream.h>
```

```
#include <conio.h>
```

```
class Input {
```

```
}
```

X

```
public:
```

```
int a, b;
```

```
void get()
```

```
{}
```

X

```
cout << "Enter two numbers:-";
```

```
cin >> a >> b;
```

```
{}
```

X

```
}
```

X

```
class Sum : public Input {
```

```
}
```

X

```
public:
```

```
void Show1()
```

```
{}
```

X

```
cout << "Sum = " << a + b << endl;
```

```
{}
```

X

```
}
```

X

```
class Product : public Input {
```

```
}
```

X

```
public:
```

```
void Show2()
```

```
{}
```

X

```
cout << "Product = " << a * b << endl;
```

```
{}
```

X

```
}
```

X

Scanned with CamScanner

class Subtract : public Input

x

Public:

void show3()

x

cout << " subtract = " << a - b ;

x

x;

void main()

x

- sum s ;

Product P ;

Subtract a ;

s.get();

s.showall();

p.get();

p.showall();

a.get();

a.show3();

getch();

x

O/P → Enter two numbers :- 4 ↴ 3 ↴

Sum = 7

Enter two numbers :- 5 ↴ 2 ↴

Product = 10

Enter two numbers :- 9 ↴ 6 ↴

Subtract = 3 -

Q5. Write a Program In C++ to demonstrate the use of Hybrid Inheritance.

```

⇒ #include <iostream.h>
#include <conio.h>
class Input
{
public:
    int a, b;
};

class getdata : public Input
{
    void get()
    {
        cout<<" enter two numbers:-";
        cin>>a>>b;
    }
};

class cons
{
public:
    int c;
    cons()
    {
        c = 30;
    }
};

class output : public cons, public getdata
{
public:

```

void Product()

α

int P;

P = a * b * c;

cout << "Product = " << C;

- α

$\rangle;$

void main()

- α

Output 0;

clrscr();

0. getch();

0. Product();

getch();

α

- QIP \rightarrow enter two number:- 7 \downarrow
1 \downarrow

Product = 240.

Q6. Write a program in C++ to demonstrate the use of Static variable.

\Rightarrow #include <iostream.h>

#include <conio.h>

class ABC

α private:

static int x;

int y;

public:

ABC()

x

y = 0;

x

void change()

x

cout << " Before Change :- " << endl;

cout << " x = " << x << endl;

cout << " y = " << y << endl;

x++;

y++;

x

void show()

x

cout << " x = " << x << endl;

cout << " y = " << y;

x

y;

int ABC :: x = 0;

void main()

x

ABC obj1, obj2;

obj1();

obj1.show();

obj2.show();

obj1.change();

obj2.change();

obj2.show();

getch();

x

O/P \rightarrow $x = 0$

$y = 0$

$z = 0$

$y = 0$

Before Change:-

$x = 0$

$y = 0$

Before Change:-

$x = 0$

$y = 0$

$z = 0$

$y = 1$

Q3. Write a program in C++ to overload "+" operator.

\Rightarrow `#include <iostream.h>`

`#include <conio.h>`

`class oper`

`{`

`private:`

`int a, b;`

`public:`

`void get()`

`{`

`cout << " enter two numbers";`

`cin >> a >> b;`

`}`

`void Show()`

`{`

```

cout << "a = " << a << endl;
cout << "b = " << b;

* 
operator operator + (operator &obj)
{
    * 
    operator () ;
    t.a = a + obj.a;
    t.b = b + obj.b;
    - return (t);
}

void main()
{
    operator (x,y,z);
    cin >> x;
    x.get();
    y.get();
    z = x+y;
    cout << "After sum value are:-";
    z.show();
    getch();
}

```

O/P → Enter two number 5 ↴

6 ↴

Enter two number 8 ↴

3 ↴

After sum value are:-

a = 13

b = 11

Q8. Write a program in C++ to overload
"++" unary operator

```
=> #include <iostream.h>
#include <conio.h>
class Timer
{
private:
    int a;
public:
    void get()
    {
        cout<<"Enter any number:-";
        cin>>a;
    }
    void show()
    {
        cout<<"After Increment the
        value is = " <<a;
    }
    void operator ++(int)
    {
        a++;
    }
};

void main()
{
    Timer T;
    T.get();
    T++;
}
```

1. Show();
getch();
X

O/P → Enter any number:- 64
After Increment the value is:- 7

Q9. Write a program in C++ to overload
" = " assignment operator.

```
#include <iostream.h>
#include <conio.h>
class Equal
{
private:
    int a, b;
public:
    void get()
    {
        cout << "Enter two numbers";
        cin >> a >> b;
    }
    void show()
    {
        cout << "a = " << a << endl;
        cout << "b = " << b << endl;
    }
    void operator = (Equal &obj)
    {
    }
```

```

    a = obj.a;
    b = obj.b;
    x
    x;
void main()
{
    equal e, f
    e.show();
    f = e;
    f.show();
    getch();
    x
}

```

O/P → enter two number 7
 9
 a = 7
 b = 9

- Q. 30. Write a Program in C++ to overload
"~=" Shorthand operator.

```

⇒ #include <iostream.h>
# include <conio.h>
class Short
{
private:
    int x, y;
public:
    void get()
    x
}

```

cout << "enter two values:-";

cin >> x >> y;

x

void show()

x

cout << "x = " << x << endl;

cout << "y = " << y;

x

void operator += (short obj)

x

x = x + obj.x;

y = y + obj.y;

x

x;

void main()

x

short s, t;

cin >> s;

s.get();

t.get();

s += t;

s.show();

get();

x

O/P → enter two numbers 6 ↴ 4 ↴

enter two number 3 ↴ 2 ↴

x = 9 y = 6

31. Write a program in C++ to enter student name, roll no and marks and display them using class & object.

```

⇒ #include <iostream.h>
#include <conio.h>
class Student
{
private:
    char name[20];
    int roll, marks;
public:
    void Input()
    {
        cout << "Enter name:-";
        cin >> name;
        cout << "Enter roll no:-";
        cin >> roll;
        cout << "Enter marks:-";
        cin >> marks;
    }
    void Show()
    {
        cout << "Name = " << name;
        cout << "Roll No = " << roll;
        cout << "Marks = " << marks;
    }
};

void main()
{
}

```

Student S;

circs();

S::input();

S::show();

getch();

X

O/P -> Enter name :- Saurabh Kumar ↴

Enter Rollno:- 61 ↴

Enter marks:- 474 ↴

Name = Saurabh Kumar

Rollno = 61

Marks = 474

Q2. Write a program in C++ to demonstrate the use of function overloading.

⇒ #include <iostream.h>
 #include <conio.h>
 void sum(int, int)
 void sum(float, float)
 void main()

&

int a, b;

float c, d;

circs();

cout << "Enter two integer values";

cin >> a >> b;

cout << "Enter two float values";

cin >> c >> d;

Sum(a,b);

Sum(c,d);

getchar();

x

void sum (int x, int y)

x

cout << " Sum of integer = " << x + y << endl;

x

Void sum (float x, float y)

x

cout << " Sum of float = " << x + y ;

x

O/P → enter two integer value 6 ↴

4 ↴

enter two float value 5.4 ↴

1.2 ↴

Sum of Integer = 10

Sum of float = 6.6

33. Write a program in C++ to demonstrate the concept of friend function.

⇒ #include <iostream.h>

#include <conio.h>

Class Sum

x

Private:

int a,b,c

Public:

void get()

x

cout << "Enter 3 numbers";

cin >> a >> b >> c;

x

Friend void fun (sum);

x;

void sum (sum abz)

x

cout << "Sum = " << abz.a + abz.b
+ abz.c;

x

void main()

x

Sum xc;

cin >> xc;

xc.get();

fun (xc)

getch();

x

O/P -> Enter 3 numbers 6 ↴

4 ↴

7 ↴

Sum = 17 -

34. Write a Program in C++ to overload "*" binary operator using friend function.

$\Rightarrow \#include <iostream.h>$

$\#include <conio.h>$

class Product

x

Private:

int x;

Public:

void get()

x

cout << " enter a number:- "

cin >> x;

x

void Show()

x

cout << " value of x = " << x;

x

friend Product operator*(Product, Product);

x;

Product operator*(Product a, Product b)

x

Product c;

c.x = a.x * b.x;

return (c);

x

void main()

x

get();

Product P, Q, X;

P.get();

Q.get();

X = P * Q;

X.show();

get();

X

O/P - enter any number 3 ↴

enter any number 2 ↴

value of X = 6.

35. Write a Program In C++ to demonstrate
the Constructor In Inheritance.

⇒ #include <iostream.h>

#include <conio.h>

class base

X

public:

base()

X

cout << "Base class" < endl;

X

X;

class derived: public base

X

public:

derived()

X

cout << "derived class";

x

x;

void main()

x

derived obj;

x

O/P → Base Class

derived Class

Q6. Write a Program In C++ to demonstrate the concept of destructor in inheritance.

⇒ #include <iostream.h>

#include <conio.h>

class Base

x

public:

~Base()

x

cout << "Base Class";

x

x;

class derived: public Base

x

public:

~derived()

x

cout << "derived class" <endl>;

x; x

void main()

x

derived obj;

x

OOP - derived class

Base class

37. Write a program in C++ to demonstrate the concept of "this" keyword.

⇒ #include <iostream.h>

#include <conio.h>

class Base

x

private:

int u, b, h;

public:

void set(int u, int b, int h)

x

this->u = u;

this->b = b;

this->h = h;

x

void area()

x

int ar;

ar = u * b * h;

cout << "area = " << ar;

x; x

void main()

x

```
Circles();
Box B;
B.set(2,4,3);
B.area();
getch();
```

x

DIP \rightarrow area = 24

38. Write a program in C++ to check the maximum number b/w two numbers using Inline Function.

\Rightarrow #include <iostream.h>

#include <conio.h>

inline int max(int x, int y)

x

if ($x > y$)

return x;

else

return y;

x

void main()

x

int a, b; c;

Circles();

cout << " enter two numbers";

cin >> a >> b;

```
c = max(a, b);
cout << " maximum = " << c;
getch();
```

X

O/P → enter two number 5 ↴

G ↴

maximum = 5 -

39. Write a program to add to add two complex numbers.

⇒ #include <iostream.h>

#include <conio.h>

class complex

X

private:

int real, img;

public:

void get()

X

cout << "enter real & img value";

cin >> real >> img;

X

void show()

X

cout << real << "+" << img << "i" ;

X

complex operator + (complex & ob)

X

Complex c;
~~c.real = real - obj.real;~~

~~c.img = img - obj.img;~~

X

X;

void main()

X

Complex c,d,e;

c.get();

d.get();

e = c+d;

cout << "After sum value are :- " << endl;

e.show();

getch();

X

O/P → enter real & img value 6+3j

3+2j

enter real & img value 9+7j

7+9j

After sum value are :-

15+10j.

40. Write a program in C++ to swap two float & int values using template.

⇒ template <class 'a'>

void main()

X

(int x, y)

float a, b;

cout << "enter two int value";
cin >> a >> b;

cout << "enter two float value";
cin >> x >> y;

swap (a, b);
swap (x, y);

show (a, b);

show (x, y);

getch();

X

void swap (a * P, a * Q)

X

a t;
t = *P;

*P = *Q;

*Q = t;

X

void show (a P, a Q)

X

cout << "1st number = " << P << endl;

cout << "2nd number = " << Q << endl;

X

Q1P -> Enter two int values 6 7

4 5

Enter two float values 4.5 4

3.2 2

1st number = 4

- 1st number = 6
- 2nd number = 3.2
- 3rd number = 4.8

41. Write a program in C++ to input a number and print reverse of the number.

⇒ #include <iostream.h>

#include <conio.h>

class reverse

{

private:

int m, r, d;

public:

void rev (int n)

{

n = n;

r = 0;

while (n != 0)

{

d = n % 10;

r = r * 10 + d;

n = n / 10;

}

cout << "reverse = " << r;

}

};

void main ()

{

```

    cout<< "enter any number :-"
    cin>> num;
    reverse(a);
    a.rev(num);
    getch();
}

```

O/P -> Enter any number 123
 reverse = 321

- Q. Write a Program In C++ To Print different subject name when the Subject Code is entered by the user. Develop the program using Switch Case.

```

→ #include <iostream.h>
#include <conio.h>
class Code
{
private:
    int ch;
public:
    void get()
    {
        cout<< "enter code."
        cin>>ch;
    }
}

```

void print()

x

switch (ch)

x

case 1:

cout << "Science";
break;

case 2:

cout << "Hindi";
break;

case 3:

cout << "Physics";
break;

case 4:

cout << "English";
break;

case 5:

cout << "Social Science";
break;

default:

cout << "Wrong code.";

x

x;

void main()

x

Code C;

circles();

circles();

circles();

x -getch();

O/P - Enter code :- A H

English -

43. Write a Program in C++ using else if to Input percentage by the user and Print division.

```

⇒ #include <iostream.h>
#include <conio.h>
class division
{
private:
    int P;
public:
    void get()
    {
        cout << "Enter Percentage";
        cin >> P;
    }
    void print()
    {
        if (P >= 60)
            cout << "1st division";
        else if (P >= 45)
            cout << "2nd division";
        else if (P >= 30)
            cout << "3rd division";
        else
            cout << "Fail";
    }
}

```

Void main()

X

```
division d;
d.set();
d.get();
d.print();
d.set();
```

X

OIP - Computer Percentage :- 54 ←
and division -

- AA. write a program in C++ using nested if
else to determine the largest
number b/w three numbers.

⇒ #include <iostream.h>

#include <conio.h>

class largest

{

private :

int a,b,c;

public :

void get()

X

cout << "enter 3 numbers";

cin >> a >> b >> c;

X

void print()

X

if ($a > b$)

if ($a > c$)

cout << "largest = " << a;

else

cout << "largest = " << c;

else

if ($b > c$)

cout << "largest = " << b;

else

cout << "largest = " << c;

x

y;

void main()

x

largest d;

cin >> d;

d.get();

d.print();

d.get();

x

O/P - enter 3 numbers : 4 ↴

7 ↴

5 ↴

largest = 7 -

45. Write a program in C++ using do while loop to accept number till user want them print total no. of +ve & -ve till end.

```

⇒ #include <iostream.h>
#include <conio.h>
void main()
{
    char ch;
    int n, p = 0, ne = 0, z = 0;
    do
    {
        cout << "Enter number: -" ;
        cin >> n;
        if (n > 0)
            p++;
        else if (n < 0)
            ne++;
        else
            z++;
    } while (ch != 'y');
}
```

```

cout << "total positive = " << endl;
cout << "total negative = " << endl;
cout << "total zero = " << endl;
getch();
}

```

Q1P → enter number :- 5 ↴
 more input :- y ↴
 enter number:- 3 ↴
 more input :- y ↴
 enter number:- 0 ↴
 more input :- y ↴
 enter number:- 6 ↴
 more input :- y ↴
 enter number:- 0 ↴
 more input :- m ↴
 total positive = 2
 total negative = 1
 total zero = 2

- 4G. Write a program in C++ using 1D array to Input 10 number them print the sum of all input number.

```

⇒ #include <iostream.h>
#include <conio.h>
class array
{
  private:
    int m[10];
}

```

```

public:
    void get()
    {
        cout << "Enter 10 numbers:- ";
        for(i=0; i<10; i++)
            cin >> arr[i];
    }

    void sum()
    {
        int sum = 0;
        for(i=0; i<10; i++)
            sum = sum + arr[i];
        cout << "Sum = " << sum;
    }

void main()
{
    array arr;
    insert();
    arr.get();
    arr.sum();
    getch();
}

```

O/P -> Enter 10 numbers:- 10 ↴ 13 ↴ 14 ↴
 12 ↴ 17 ↴ 21 ↴ 3 ↴ 6 ↴ 9 ↴ 1 ↴
 Sum = 96.

Q7. Write a program in C++ using string to input string then print each character of string in a new line.

```

⇒ #include <iostream.h>
#include <conio.h>
void main()
{
    int i;
    char str[20];
    clrscr();
    cout << " Enter a String ";
    gets(str);
    cout << " Given String are:- " << endl;
    for (i = 0; str[i] != NULL; i++)
    {
        cout << str[i] << endl;
    }
    getch();
}

```

O/P → enter a String :- Saurabh

Given String are:-

S
a
u
r
a
b
h

48. Write a program in C++ using String to input a string then count the total number of character in the String.

```

=> #include <iostream.h>
# include <conio.h>
class String
{
private:
    char Str[30];
    int i;
public:
    void get()
    {
        cout<<"Enter a String:-";
        gets(Str);
    }
    void count()
    {
        int C=0;
        for(i=0; Str[i]!='\0'; i++)
        {
            C++;
        }
        cout<<"Total number of character
        in String = "<<C;
    }
};

void main()
{
}

```

```

String s;
cin>>s;
cout<<s.length();
cout<<s.size();
cout<<s.length();
cout<<s.size();
    
```

X

O/P :- enter a string :- Saurebh Kumar
 Total number of character in the
 String = 13.

49. Write a Program in C++ to calculate the factorial of given number using recursive function.

```

#include <iostream.h>
#include <conio.h>
int factorial(int);
void main()
{
    int n, f = 0;
    cout << "enter any number";
    cin >> n;
    f = factorial(n);
    cout << "Factorial = " << f;
    getch();
}
    
```

X

```
int factorial (int n)
```

X

```
if (n == 0)
```

```

    X
    return 1;
else
    X
    return (n * factorial(n-1));
    X

```

O/P → Enter any number:- 5 ↴

Factorial = 120

Q5. Write a Program in C++ to print the product of 4 Input value through main function and also print through main function.

```

→ #include <iostream.h>
# include <conio.h>
class Product
{
    X
    private:
        int a,b,c,d;
    public:
        int mul(int x,int y,int z,int m)
        X
        int P;
        a=x;
        b=y;
        c=z;
        d=m;
        P=a*b*c*d;

```

```

    return (P);
}
void main()
{
    Product m;
    cout << "Enter 4 numbers:-";
    cin >> P >> Q >> R >> S;
    cout << "Product = " << t;
    getch();
}

```

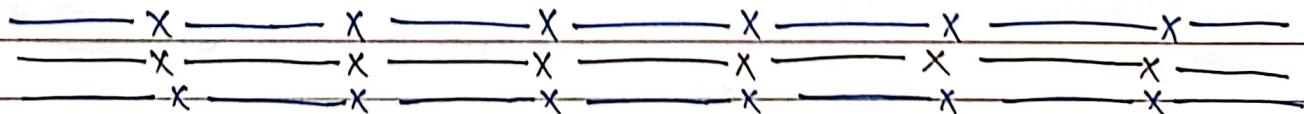
QIP → Enter 4 number :- 4 ↴

Q ↴

3 ↴

2 ↴

Product = 144



THE
END

COMPLETED