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S.No	Program Names	Pages	Remark
1.	//WAP to print your Intro in C++		
2.	//WAP to print the Value using variable.		
3.	//WAP to calculate sum & avg of three number.		
4.	//WAP to calculate area of circle, rectangle, triangle.		
5.	//WAP to print the basic detail of student using diff data type.		
6.	//WAP to use Cin & Cout by using user-defined function.		
7.	//WAP to use Enum data type in C++		
8.	//WAP to use new / delete operator in C++		
9.	//WAP to use of structure in C++		

PROGRAM I

```
//WAP to Print your Intro In C++
#Include <conio.h>
#Include<iostream.h>
void main()
{
clrscr();
cout<<"My Name Is Abhinav Kaushik"<<endl;
cout<<"I am 18th year Old Boy"<<endl;
cout<<"My father Name Is Anil Kumar Sharma"<<
                                        endl;
cout<<"He is a English lecturer"<<endl;
cout<<"My hobbies are Singing and many more"
                                    <<endl;
cout<<"like playing Cricket, badminton"<<endl;
cout<<"And motivate to all my followers.";
getch();
}
```

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Output -

My Name Is Abhinav Kaushik
I am 18th year old boy
My Father Name Is Anil Kumar Sharma
He is a English lecturer
My Hobbies are Singing and many more
like playing Cricket, Badminton
And motivate to all my followers.

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Program 2

//WAP to Print the Value using Variable

```
#include<iostream.h>
#include<conio.h>
  void main()
{
  clrscr();
  float a,b, Sum;
  cout<< "enter the value of a";
  cin>>a;
  cout<< "enter value is = "<<a<<endl;
  cout<< "enter the value of b";
  cin>>b;
  cout<< "enter the value of b = "<<b<<endl;
  Sum = a+b;
  cout<< "the sum of a+b= "<<sum;
  getch();
}
```

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Output -

enter the value of a 5
enter value is = 5
enter the value of b = 6
enter the value is = 6
the sum of a+b = 11

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Program 3

// WAP to calculate sum & avg of three number.

```
#include <iostream.h>
#include <conio.h>
 void main()
{
clrscr();
float a,b,c, sum, avg;
cout<<"enter the value of abc";
 cin>>a>>b>>c;
 cout<<"enter the value of abc="<<a<<b<<c<<endl;
 sum=a+b+c;
cout<<"the sum of a+b+c="<<sum<<endl;
 avg = sum/2;
cout<<"the avg of given no="<<avg;
getch();
}
```

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Output -

enter the value of abc
2
7
1
enter the value of abc= 2 7 1
the sum of a+b+c= 10
the avg of given no = 5

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Program 4

// WAP to Calculate area of circle, rectangle, triangle.

```
# include <iostream.h>
# include <conio.h>
  void main()
{
  clrscr();
  float rad = 3, area;
  area = (3.14 * rad * rad);
  cout << "area of circle is " << area;
  getch();
}
```

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Output -

area of circle is 28.26

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Area of Rectangle

```
# include <iostream.h>
# include <conio.h>
 void main()
{
 clrscr();
 int length, breadth, area;
 cout<<" area of rectangle \n";
 cout<< "\n enter the length of rectangle: ";
 cin>>length;
 cout<<"\n enter the breadth of rectangle: ";
 cin >> breadth;
 area = length * breadth;
 cout << "\n area of rectangle : "<< area;
 getch();
}
```

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Output -

area of rectangle

enter the length of rectangle: 5
enter the breadth of rectangle: 4

area of rectangle: 20

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Area of triangle

```
# include <iostream.h>
# include <conio.h>
 void main()
{
 clrscr();
 float b,h,area;
 cout<<"enter base length of triangle: ";
 cin>>b;
 cout<<"enter height length of triangle: ";
 cin>>h;
 area=0.5*b*h;
 cout<<"\n area="<<area;
 cout<<endl;
 getch();
}
```

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Output -

enter base length of triangle : 2
enter height length of triangle : 6

area = 0

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Program 5

//WAP to print the basic detail of student using diff. data type in C++.

```
#Include<iostream.h>
#include<conio.h>
 void main()
{
 clrscr();
 char name[50];
 int rollno;
 float fee;
 char add[100];
 cout<<"the name of student = ";
 cin>>name;
 cout<<"the name is = "<<name<<endl;
 cout<<"enter the roll no = ";
 cin>>rollno;
 cout<<"rollno is = "<<rollno<<endl;
 cout<<"enter the fee = ";
 cin>>fee;
 cout<<"fee is = "<<fee<<endl;
 cout<<"enter the add = ";
 cin>>add;
 cout<<"add is = "<<add<<endl;
 getch();
}
```

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Output-

enter the name of student= abhinav
the name is = abhinav
enter the roll no = 362
roll no is = 362
enter the fee = 35,300
fee is = 35,300
enter the add = IP Bsn
add is = IP

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Program 6

//WAP to use Cin & Cout by using user-defined functions.

```
#include<iostream.h>
#include<conio.h>
void marvel()
{
 cout<<"Avengers Endgame";
}
 void main()
{
 clrscr();
 marvel();   //call
 getch();
}
```

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Output -

Avengers Endgame

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Program 7

//WAP to use Enum data type in C++.

```
#include<iostream.h>
#include<conio.h>
 enum week
{
 Sun,
 mon,
 Tue,
 Wed,
 thur,
 fri,
 Sat,
};
void main()
{
 clrscr();
 week day;
 day = sun;
for(day = sun; day<=sat; day++)
{
 cout<<"day is "<<day<<endl;
}
  getch();
}
```

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Output -

```
day is 0
day is 1
day is 2
day is 3
day is 4
day is 5
day is 6
```

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Program 8

//WAP to use new/delete operator in C++

```
#include<iostream.h>
#include<conio.h>
  void main()
{
   clrscr();
   int*value= new int;
   char*alphabet = new char;
   float*point = new float;
   double*jyaada = new double;

*alphabet = 'A';
*value = 23;
*point = 12.5;
*jyaada = 2345.856463;

cout<<*alphabet<<endl;
cout<<*value<<endl;
cout<<*point<<endl;
cout<<*jyaada<<endl;

delete alphabet;
delete value;
delete point;
delete jyaada;

  getch();
}
```

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Output -

A
23
12.5
2345.856463

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Program 9

//WAP to use of structure in C++.

```
#Include<iostream.h>
#include<conio.h>
 struct books
{
  char title[50];
 float price;
 int pages;
 char author[50];
 char sub[30];
};
 void main()
{
  clrscr();
  books s1;   //instance
 cout<<"enter title";
 cin>>s1.title;
 cout<<"title is "<<s1.title<<endl;
 cout<<"enter price";
 cin>>s1.price;
 cout<<"price is "<<s1.price<<endl;
 cout<<"enter pages";
 cin>>s1.pages;
 cout<<"pages is "<<s1.pages<<endl;
 cout<<"enter the name of auther"<<ends;
  cin>>s1.author;
 cout<<"author is "<<s1.author<<endl;
  cout<<"enter sub";
  cin>>s1.sub;
 cout<<"Sub is "<<s1.sub<<endl;
  getch();
}
```

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Output -

enter title hero
title is hero
enter price 230
price is 230
enter pages 40
pages is 40
enter the name of author sahani
author is sahani
enter sub War
Sub is War.

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8.	//WAP to use new / delete operator in C++		
9.	//WAP to use of structure in C++		
10.	//WAP to demonstrate use of reference variable.		
11.	//WAP to use scope resolution operator in C++		
12.	//WAP to accessing data members of class in C++		
13	//WAP to adding two no in class		
14.	//WAP to show the concept of encapsulation using class in C++.		
15.	//WAP to using multiple func. in class for mathematical operation.		
16.	//WAP to show the concept of abstraction using math.h header file.		

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S.No	Program Names	Pages	Remark
17.	//WAP to show the concept of abstraction using math.h header file in class format.		

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PROGRAM - 10

//WAP to demonstrate use of reference variable.

```
#include <iostream.h>
#include <conio.h>
  void main()
{
 clrscr();
 int a = 20;
 int &Abhinav = a;
 cout<< "value of a = "<< Abhinav;
 getch();
}
```

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Output -

value of a = 20

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Program 11

//WAP to use scope resolution operator in C++

```
#include <iostream.h>
#include <conio.h>
 int abc = 30; //Global variable
 void main()
{
  clrscr();
  int abc = 20;
  cout << "local variable is = " << abc << endl;
  cout << "global variable is = " << ::abc;
  getch();
}
```

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Output -

local Variable is = 20
global variable is = 30

Program 12

// WAP to accessing data members of class in C++

```
#include <iostream.h>
#include <conio.h>
 class section
{
  public:
 char name[50];
 int id;
 void input()
{
 cout<< "enter your name ";
 cin>>name;
 cout<< " enter your id ";
 cin>> id;
 cout <<name <<endl;
 cout<<id;
}
};
void main()
{
 clrscr();
 section A;
 A.input();          //function call

 getch();
}
```

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Output -

enter your name ABHINAV
enter your id 362
ABHINAV
362

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Program 13

//WAP to adding two no. using class in C++.

```
#include <iostream.h>
#include <conio.h>
 class mathematics
{
 public:
 int a,b;
 void input()
{
 cout<<"input two numbers \n";
  cin>>a>>b;
}
  void add()
{
 cout <<" Result is: " <<a+b;
}
};
  void main()
{
  clrscr();
  mathematics A;
  A.input();
  A.add();
  getch();
}
```

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Output -

input two numbers
3
2
Result is : 5

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Program 14

//WAP to show the concepts of encapsulation using class in C++.

```
#include<iostream.h>
#include<conio.h>
class encapsulation
{
  private:
  float radius;          // data member
  float area;
  public:
  void circle()          //member function.
{
   cout<<"enter a radius = ";
   cin>>radius;
   area = 3.14 * radius * radius;
   cout<<"area of circle =" <<area;

}
};
  void main()
{
  clrscr();
  encapsulation box;
  box.circle();
  getch();
}
```

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Output -

enter a radius
2
area of circle is = 12.56

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PROGRAM 15

//WAP to using multiple func. in class for mathe-matical operation.

```
#include <iostream.h>
#include <conio.h>
 class math
{
   public:
   int a,b,c;
   void add()
{
 cout<<"enter first number= ";
 cin>>a;
 cout<<"enter second number= ";
 cin>>b;
  c=a+b;
  cout<<"add of two numbers= "<<c<<endl;
}
  void sub()
{
 cout<<"enter first number= ";
 cin>>a;
 cout<<"enter second number= ";
  cin>>b;
  c=a-b;
  cout<<"sub of two numbers= "<<c;
}
};
   void main()
{
   clrscr();
```

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```
math ar;
ar.add();
ar.sub();
getch();
}
```

Date

Output-

```
enter first number = 2
enter second number = 3
add of two number = 5
enter first number = 2
enter second number = 3
Sub of two number = -1
```

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Program 16

//WAP to show the concept of abstraction using math.h header file.

```
#include <iostream.h>
#include <conio.h>
#include <math.h>
void main()
{
clrscr();
int n, power, result;
cout << "enter a no: ";
cin >> n;
cout << "enter power for given no. ";
cin >> power;
result = pow(n, power);
cout << "result " << result;
getch();
}
```

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Output -

enter a no: 2
enter power for given no. 2
result 4

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PROGRAM 17

```
//WAP to show the concept of abstraction using math.h
 header file in class format.
#include <iostream.h>
#include <conio.h>
#include <math.h>
 class math
{
 public:
 int n, power, result;
 void square()
{
 cout << "enter a no. ";
 cin>>n;
 cout<< "enter power ";
 cin >> power;
 result = pow( n, power);
 cout << "result " << result;
 }};
 void main(){
 clrscr();
 math Ar;
 Ar.square();
 getch();
}
```

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Output -

enter a no. 3
enter power 3
result 27