MAHARISHI DAYANAND UNIVERSITY

Delhi Global Institute of Technology

OOPL Using C++

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INDEX

Program 1

Aim: WAP in C++ demonstrating concept of structure.

CODE

```
≡  File   Edit   Search   Run   Compile  Debug  Project  Options     Window  Help
┌─[■]─────────────────────── EG1_STRU.CPP ───────────────────────1─[↕]─┐
│struct student                                                         │
│{                                                                      │
│char *name;                                                            │
│int age;                                                               │
│};                                                                     │
│void main(void)                                                        │
│{                                                                      │
│struct student s1;                                                     │
│clrscr();                                                              │
│s1.name="Saurav" ;                                                     │
│s1.age=19;                                                             │
│cout<<endl<<"name is"<<s1.name;                                        │
│cout<<endl<<"age is"<<s1.age;                                          │
│getch();                                                               │
│}                                                                      │
│                                                                       │
│                                                                       │
│                                                                       │
│═══ 11:47 ═══◄■                                                        │
 F1 Help   Alt-F8 Next Msg    Alt-F7 Prev Msg   Alt-F9 Compile   F9 Make   F10 Menu
```

OUTPUT
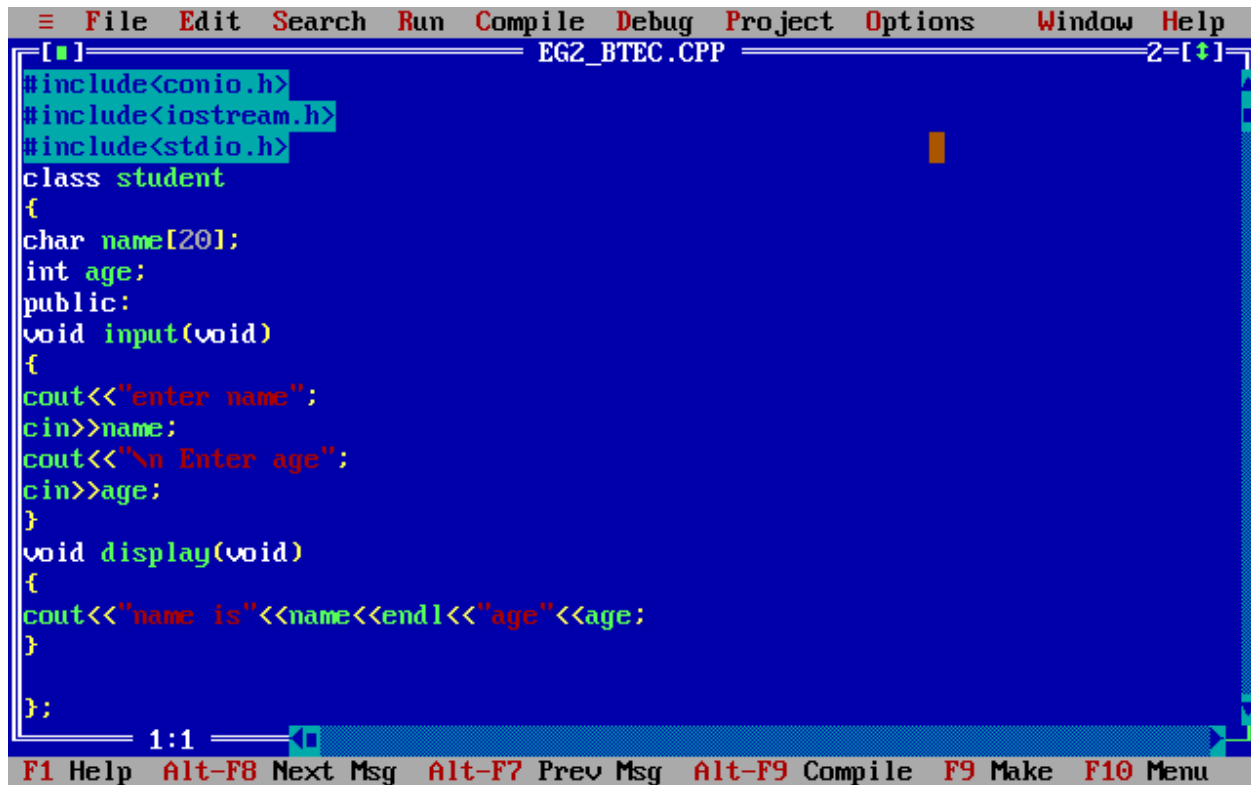
```
name isSaurav
age is19
```
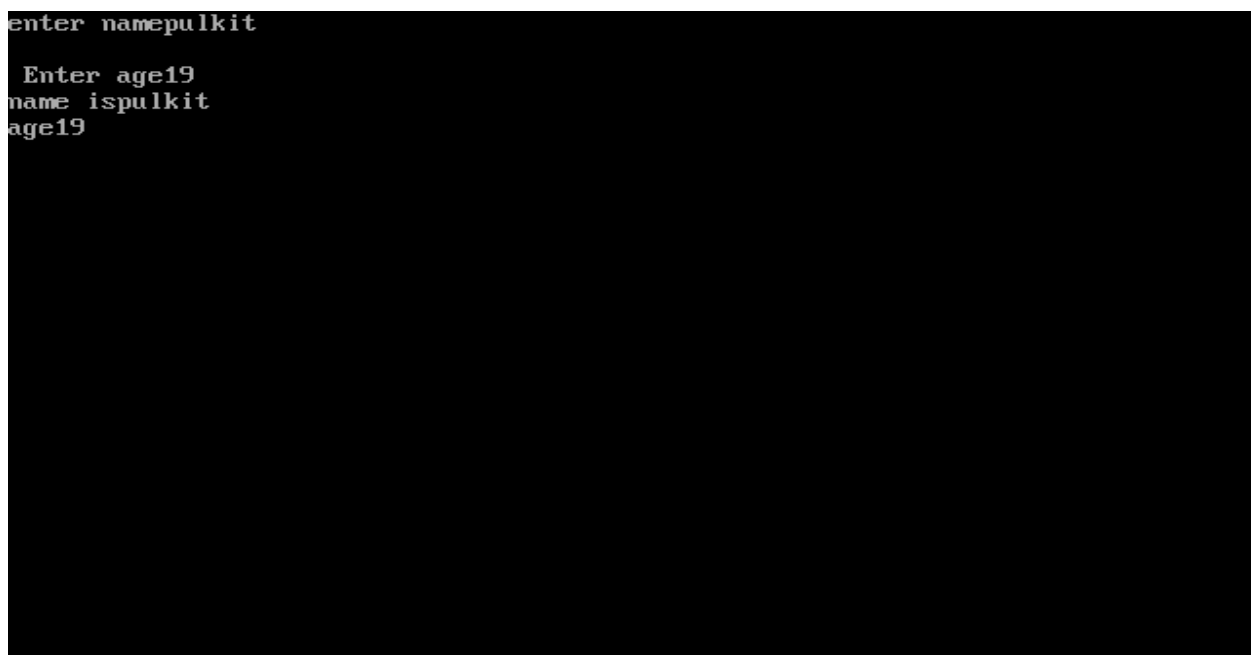
Program 2

Aim: WAP in C++ Demonstrating the concept of class defining inside member functions.

CODE

```
≡  File   Edit   Search   Run   Compile  Debug   Project  Options      Window  Help
[■]                            EG2_BTEC.CPP                          2=[↕]
#include<conio.h>
#include<iostream.h>
#include<stdio.h>
class student
{
char name[20];
int age;
public:
void input(void)
{
cout<<"enter name";
cin>>name;
cout<<"\n Enter age";
cin>>age;
}
void display(void)
{
cout<<"name is"<<name<<endl<<"age"<<age;
}

};
    1:1
F1 Help   Alt-F8 Next Msg   Alt-F7 Prev Msg   Alt-F9 Compile   F9 Make   F10 Menu
```

OUTPUT

```
enter namepulkit

 Enter age19
name ispulkit
age19
```

Program 3

Aim: WAP in C++ Demonstrating the concept of class defining outside member functions.

CODE

```
  ≡  File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
 ┌[■]════════════════════════ EG7_BTEC.CPP ═══════════════════════════[↕]┐
 │#include<conio.h>  _
 │#include<iostream.h>
 │#include<stdio.h>
 │class student
 │{
 │char name[20];
 │int age;
 │public:
 │void input(void);
 │void display(void);
 │};
 │void main(void)
 │{
 │ student s1;
 │clrscr();
 │s1.input();
 │s1.display();
 │getch();
 │
 │}
 │void student::input(void)
 └══════ 1:19 ═══◄□
  F1 Help  Alt-F8 Next Msg  Alt-F7 Prev Msg  Alt-F9 Compile  F9 Make  F10 Menu
```

```
  ≡  File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
 ┌[■]════════════════════════ EG7_BTEC.CPP ═══════════════════════════[↕]┐
 │{
 │cout<<"enter name";
 │cin>>name;
 │cout<<"\n Enter age";
 │cin>>age;
 │}
 │void student::display(void)
 │{
 │cout<<"name is"<<name<<endl<<"age"<<age;
 │}
 │
 │
 │
 │
 │
 │
 │
 │
 └══════ 22:1 ═══◄□
  F1 Help  Alt-F8 Next Msg  Alt-F7 Prev Msg  Alt-F9 Compile  F9 Make  F10 Menu
```
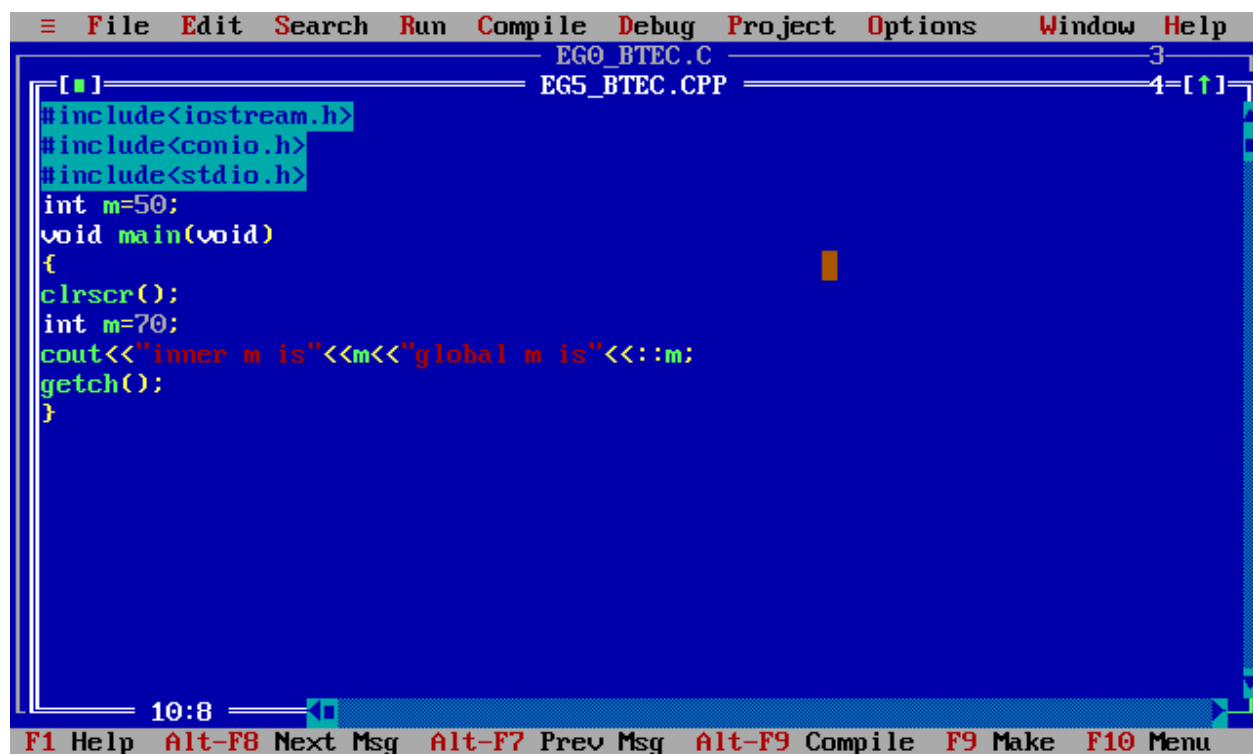
OUTPUT

```
enter nameharsh

 Enter age20
name isharsh
age20_
```

Program 4

Aim: WAP demonstrating concept of scope resolution operator.

CODE

```
 ≡   File   Edit   Search   Run   Compile   Debug   Project   Options      Window   Help
                              EG0_BTEC.C                                        3
  [■]                        EG5_BTEC.CPP                                    4=[↑]
 #include<iostream.h>
 #include<conio.h>
 #include<stdio.h>
 int m=50;
 void main(void)
 {
 clrscr();
 int m=70;
 cout<<"inner m is"<<m<<"global m is"<<::m;
 getch();
 }




        10:8
 F1 Help   Alt-F8 Next Msg   Alt-F7 Prev Msg   Alt-F9 Compile   F9 Make   F10 Menu
```
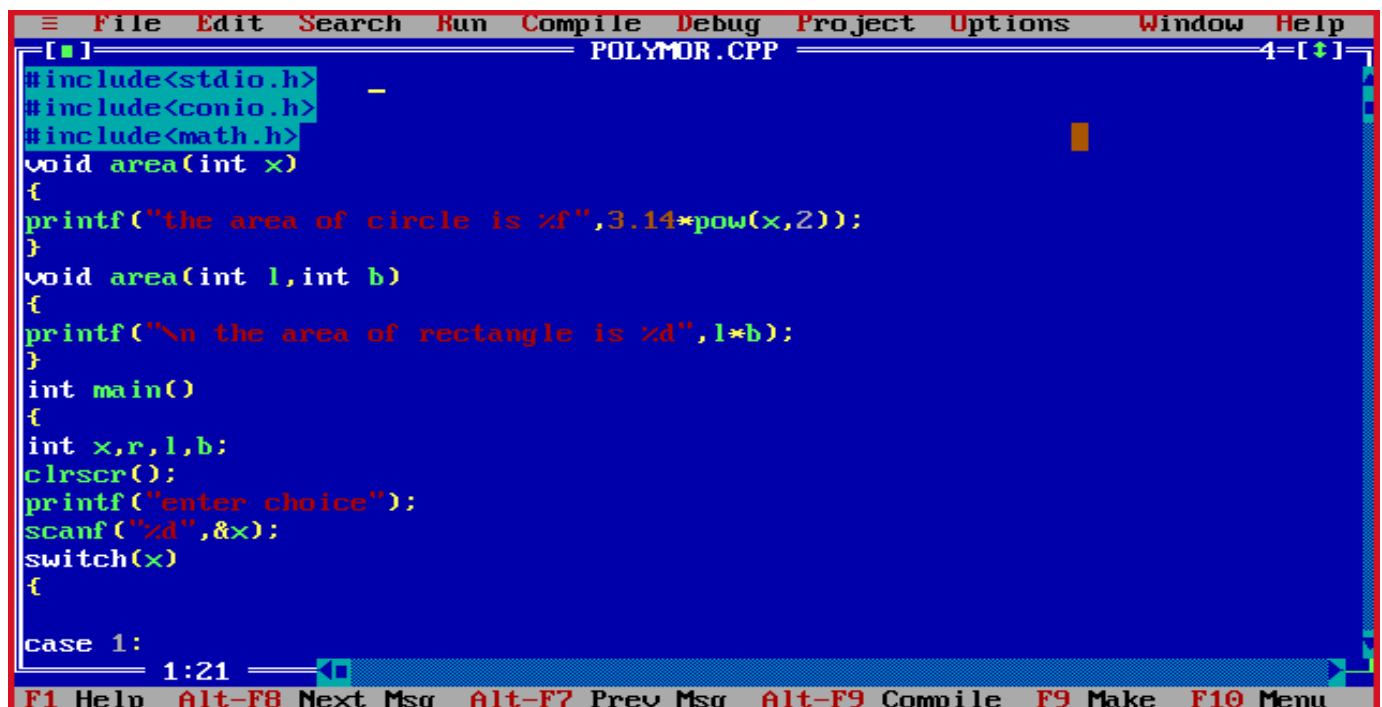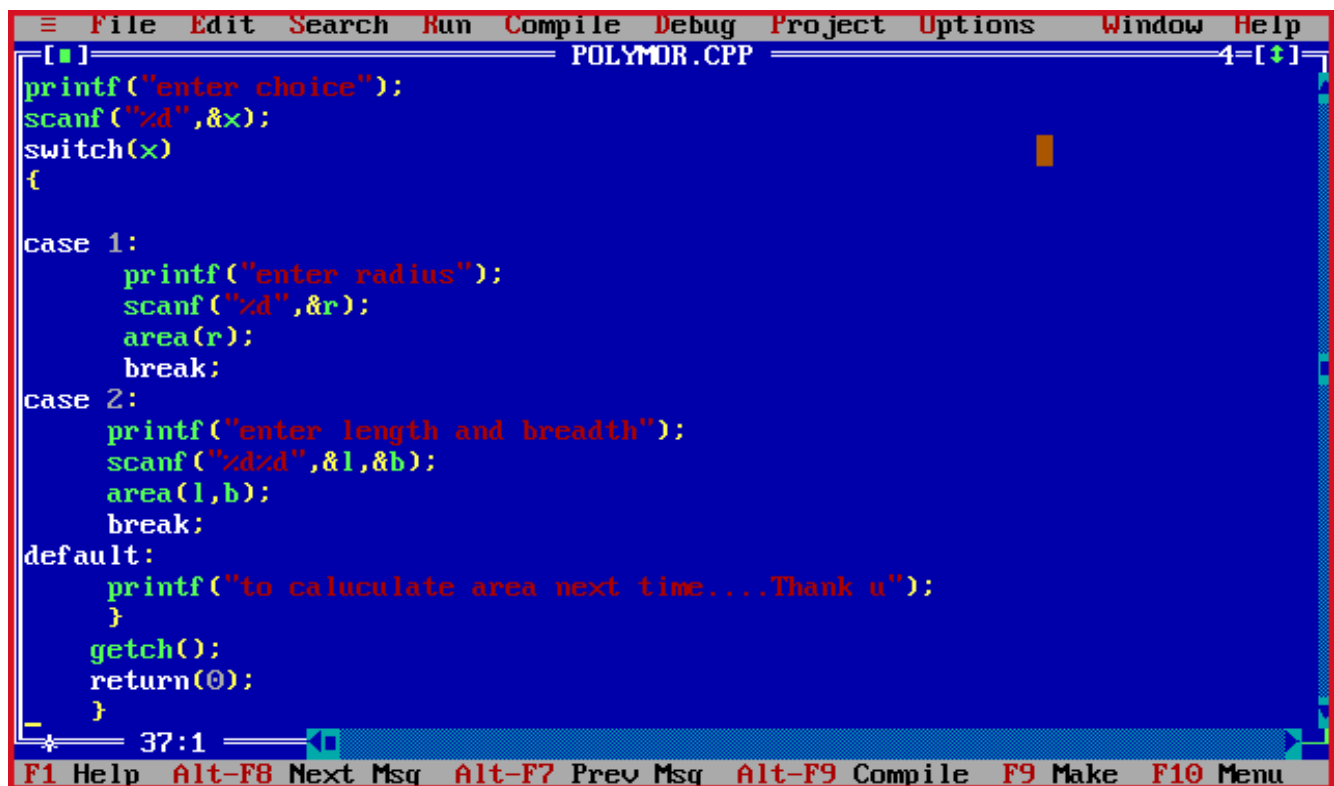
OUTPUT

```
inner m is70global m is50
```

Program 5

Aim: WAP in C++ demonstrating polymorphism/to calculate area of circle as well as area of rectangle.

CODE
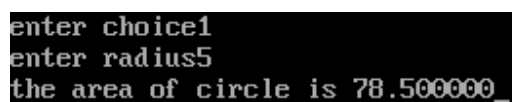
```
≡  File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
┌─[■]──────────────────── POLYMOR.CPP ─────────────────────4─[↕]┐
#include<stdio.h>
#include<conio.h>
#include<math.h>
void area(int x)
{
printf("the area of circle is %f",3.14*pow(x,2));
}
void area(int l,int b)
{
printf("\n the area of rectangle is %d",l*b);
}
int main()
{
int x,r,l,b;
clrscr();
printf("enter choice");
scanf("%d",&x);
switch(x)
{

case 1:
─── 1:21 ═══◄□
 F1 Help  Alt-F8 Next Msg  Alt-F7 Prev Msg  Alt-F9 Compile  F9 Make  F10 Menu
```

```
 ≡  File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
┌─[■]══════════════════════ POLYMOR.CPP ═══════════════════════4═[↕]┐
│printf("enter choice");                                             ▲│
│scanf("%d",&x);                                                      │
│switch(x)                                    ▮                        │
│{                                                                    │
│                                                                     │
│case 1:                                                              │
│     printf("enter radius");                                        │
│     scanf("%d",&r);                                                │
│     area(r);                                                       │
│     break;                                                         ▐│
│case 2:                                                              │
│     printf("enter length and breadth");                            │
│     scanf("%d%d",&l,&b);                                           │
│     area(l,b);                                                     │
│     break;                                                         │
│default:                                                            │
│     printf("to caluculate area next time....Thank u");            │
│     }                                                              │
│   getch();                                                         │
│   return(0);                                                       │
│   }                                                                ▼│
│─┼═══ 37:1 ═══◄■══════════════════════════════════════════════════►─┘
 F1 Help  Alt-F8 Next Msg  Alt-F7 Prev Msg  Alt-F9 Compile  F9 Make  F10 Menu
```

OUTPUT

```
enter choice1
enter radius5
the area of circle is 78.500000_
```

Program 6

Aim: WAP in C++ demonstrating the concept of static member data.

CODE

```
#include<iostream.h>
#include<conio.h>
class x1
{
static int i;
int code;
public:
void count()
{
code=++i;
}
void display()
{
cout<<code;
}
};
int x1::i;
void main()
{
clrscr();
x1 a,b,c,d;
```

```
a.count();
b.count();
c.count();
d.count();
a.display();
b.display();
c.display();
d.display();
getch();
}
```
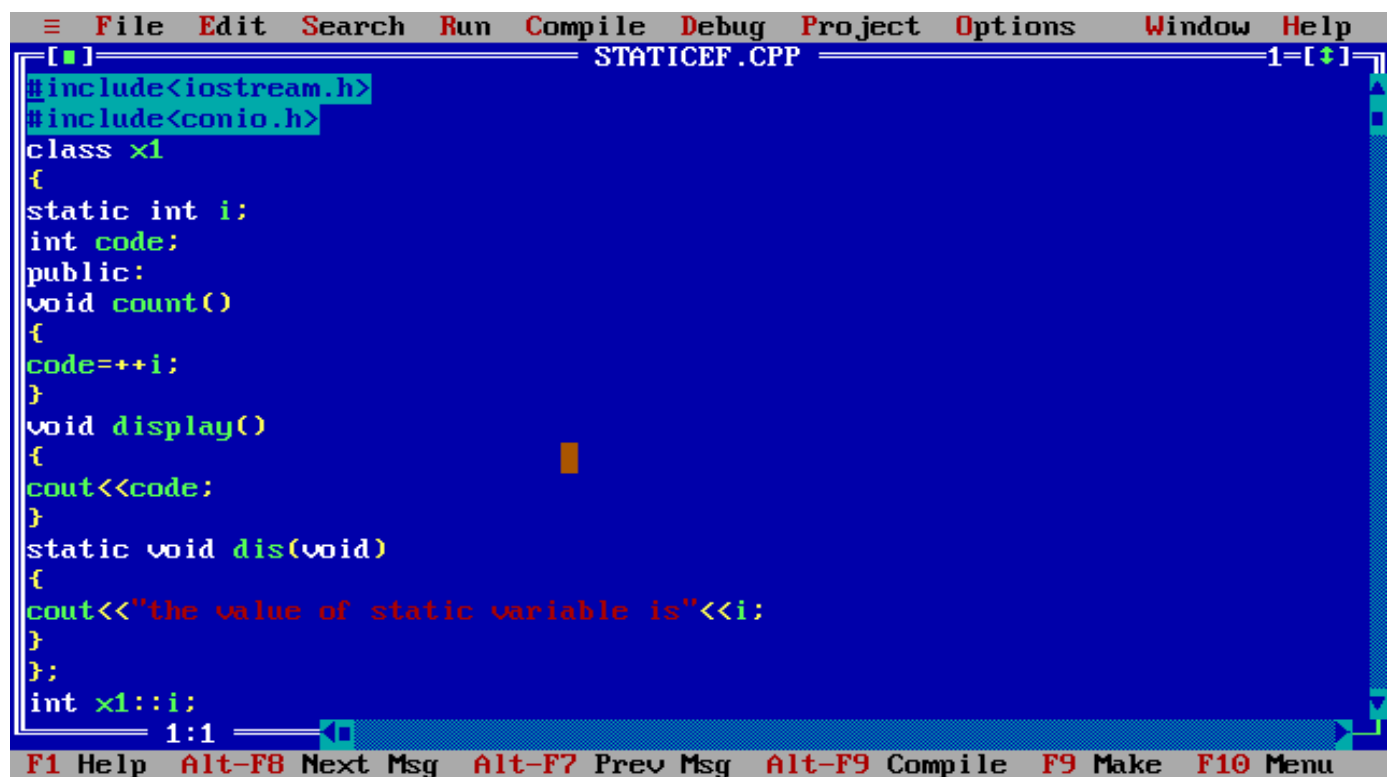
OUTPUT

```
1234
```

Program 7

Aim: WAP in C++ demonstrating the use of static member functions.

CODE

```cpp
≡  File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
┌─[■]────────────────────── STATICEF.CPP ──────────────────────1═[↕]─┐
#include<iostream.h>
#include<conio.h>
class x1
{
static int i;
int code;
public:
void count()
{
code=++i;
}
void display()
{
cout<<code;
}
static void dis(void)
{
cout<<"the value of static variable is"<<i;
}
};
int x1::i;
─────── 1:1 ───────
F1 Help   Alt-F8 Next Msg   Alt-F7 Prev Msg   Alt-F9 Compile   F9 Make   F10 Menu
```

```
void main()
{
clrscr();
x1 a,b,c,d;
a.count();
b.count();
c.count();
d.count();
a.display();
b.display();
c.display();
d.display();
x1::dis();
getch();
}
```

OUTPUT

```
1234the value of static variable is4
```

Program 8

Aim: WAP demonstrating the concept of Default Constructor.

CODE

```
≡  File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
[■]========================= DEFAULT.CPP =========================[↕]
#include<conio.h>
#include<iostream.h>
#include<stdio.h>
#include<string.h>
class student
{
char name[20];
int age;
public:
 student();
};
void main(void)
{
 student s1;
clrscr();
s1.display();
getch();

}
 student::student()
 {
======= 1:21 ====◄▮
F1 Help  Alt-F8 Next Msg  Alt-F7 Prev Msg  Alt-F9 Compile  F9 Make  F10 Menu
```

```
≡  File  Edit  Search  Run  Compile  Debug  Project  Options    Window  Help
[■]========================= DEFAULT.CPP =========================[↕]
 {
 strcpy(name,"ABHI");
 age=20;
 }
void student::display(void)
{
cout<<"name is"<<name<<endl<<"age"<<age;
}




======= 21:3 ====◄▮
F1 Help  Alt-F8 Next Msg  Alt-F7 Prev Msg  Alt-F9 Compile  F9 Make  F10 Menu
```
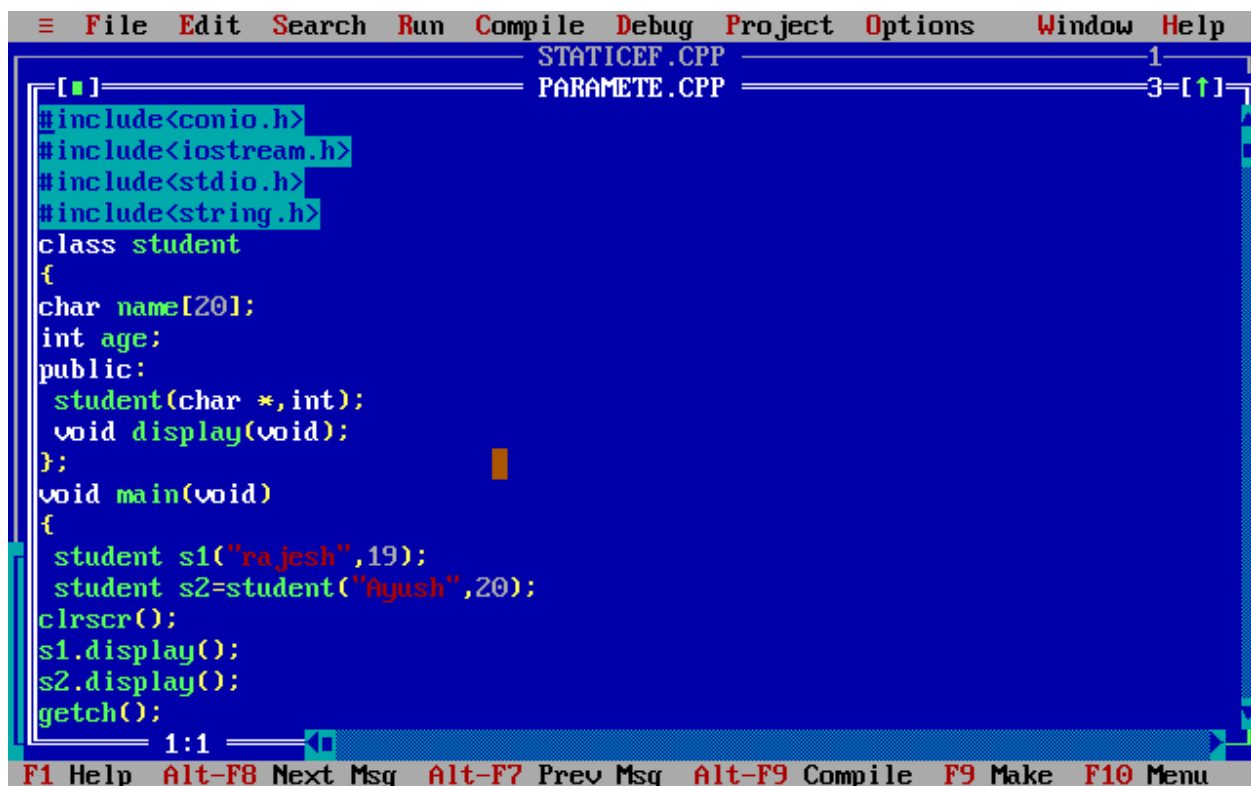
OUTPUT

```
name isABHI
age20_
```

Program 9

Aim: WAP in C++ demonstrating the concept of parameterized constructors.

CODE

```
≡  File   Edit   Search   Run   Compile   Debug   Project   Options      Window   Help
                            ┌──── STATICEF.CPP ──────────────────────1──────┐
  ┌[■]═══════════════════════ PARAMETE.CPP ══════════════════════3═[↑]═┐
  │#include<conio.h>                                                    ▲
  │#include<iostream.h>                                                 ■
  │#include<stdio.h>
  │#include<string.h>
  │class student
  │{
  │char name[20];
  │int age;
  │public:
  │ student(char *,int);
  │ void display(void);
  │};                         █
  │void main(void)
  │{
  │ student s1("rajesh",19);
  │ student s2=student("Ayush",20);
  │clrscr();
  │s1.display();
  │s2.display();
  │getch();                                                            ▼
  └──── 1:1 ════◄■──────────────────────────────────────────────────►┘
 F1 Help   Alt-F8 Next Msg   Alt-F7 Prev Msg   Alt-F9 Compile   F9 Make   F10 Menu
```

```
                          ── STATICEF.CPP ─────────────────────1───
┌[■]══════════════════════ PARAMETE.CPP ══════════════════3═[↑]╖
│                                                                ▲
│}                                                               ▓
│ student::student(char *p,int a)                                ▓
│ {                                                              ▓
│ strcpy(name,p);                                                ▓
│ age=a;                                                         ▓
│ }                                                              ▓
│void student::display(void)                                     ▓
│{                                                               ▓
│cout<<"name is"<<name<<endl<<"age"<<age;                        ▓
│}                                                               ▓
│                                                                ■
│                                                                ▓
│                                                                ▓
│                                                                ▓
│                                                                ▓
│                                                                ▓
│                                                                ▼
└═══ 21:1 ═══◄□▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒►┘
```

OUTPUT

```
name israjesh
age19name isAyush
age20_
```