

Task 2.1:

```
#include<iostream>
```

```
#include<iomanip>
```

```
using std::cout;
```

```
using std::endl;
```

```
using std::cin;
```

```
using std::setprecision;
```

```
using std::fixed;
```

```
using std::scientific;
```

```
int main()
```

```
{
```

```
    double a=3.1415926534;
```

```
    double b=2006.0;
```

```
    double c=1.0e-10;
```

```
    cout<<a<<endl;
```

```
    cout<<b<<endl;
```

```
    cout<<c<<endl;
```

```
    cout<<"numbers with precision"<<endl;
```

```
    cout<<setprecision(5)<<a<<endl;
```

```
    cout<<setprecision(5)<<b<<endl;
```

```
    cout<<setprecision(5)<<c<<endl<<endl;
```

```
    cout<<"numbers with fixed"<<endl;
```

```
    cout<<fixed;
```

```
    cout<<setprecision(5)<<a<<endl;
```

```
    cout<<setprecision(5)<<b<<endl;
```

```
    cout<<setprecision(5)<<c<<endl<<endl;
```

```
    cout<<"numbers with scientific"<<endl;
```

```
    cout<<scientific;
```

```
    cout<<setprecision(5)<<a<<endl;
```

```

        cout<<setprecision(5)<<b<<endl;

        cout<<setprecision(5)<<c<<endl;

        return 0;

}

```

```

C:\Users\F228813\Documents\Untitled1.exe
3.14159
2006
1e-010
numbers with precision
3.1416
2006
1e-010

numbers with fixed
3.14159
2006.00000
0.00000

numbers with scientific
3.14159e+000
2.00600e+003
1.00000e-010
-----
Process exited with return value 0
Press any key to continue . . .

```

Task 2.2:

```
#include<iostream>
```

```
#include<iomanip>

using std::cout;
using std::endl;
using std::cin;
using std::setprecision;
using std::fixed;
using std::scientific;

int main()
{
    double a=3.14159,b;

    cin>>b;

    b=a;

    cout<<"numbers with precision"<<endl;
    cout<<setprecision(5)<<a<<endl;
    cout<<setprecision(9)<<a<<endl<<endl<<endl;
    cout<<"numbers with fixed"<<endl;
    cout<<fixed;
    cout<<setprecision(5)<<a<<endl;
    cout<<setprecision(9)<<a<<endl;

    return 0;

}
```

```
C:\Users\F228813\Documents\Untitled1.exe
26
numbers with precision
3.1416
3.14159

numbers with fixed
3.14159
3.141590000

-----
Process exited with return value 0
Press any key to continue . . .
```

Task 2.3:

```
#include<iostream>
```

```
#include<cstdlib>
```

```
using std::cout;
```

```
using std::endl;
```

```
using std::cin;
```

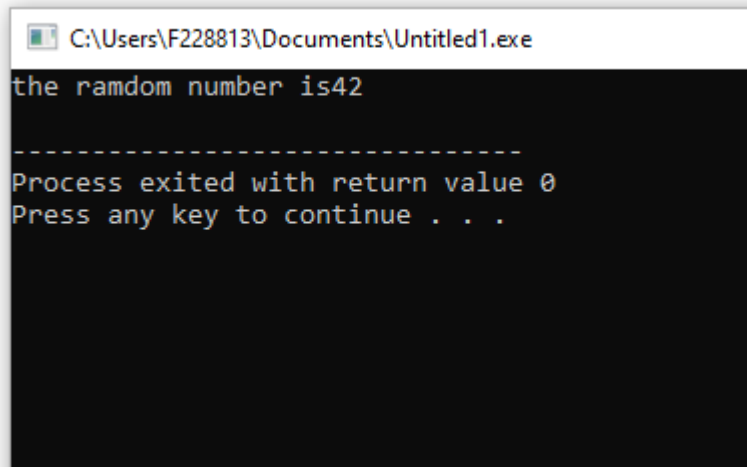
```
int main()
```

```

{

    cout<<"the ramdom number is"<<(1+(rand()%100))<<endl;
    return 0;
}

```



Task 2.4:

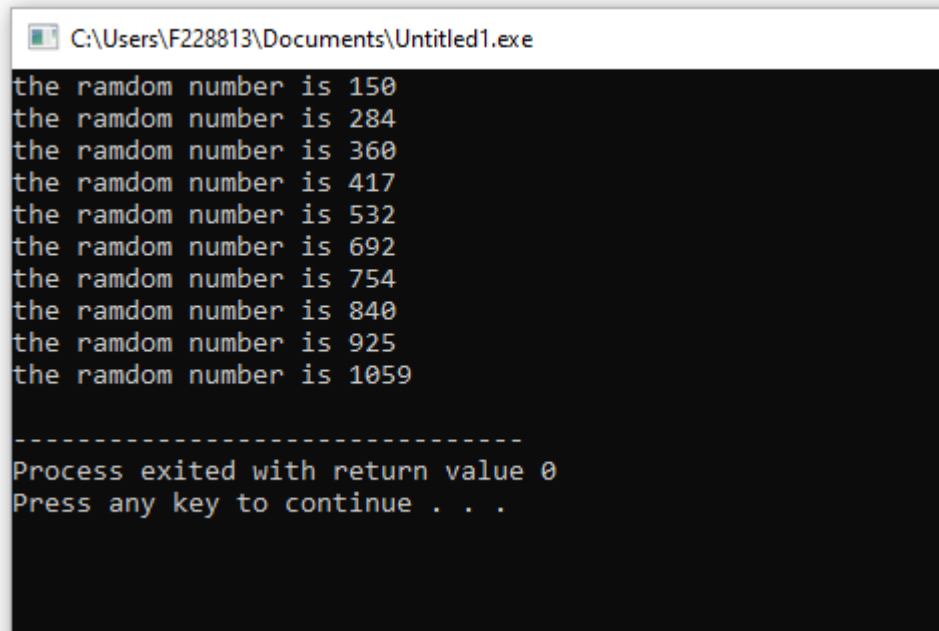
```

#include<iostream>
#include<ctime>
#include<cstdlib>
using std::cout;
using std::endl;
using std::cin;

int main()
{

```

```
    srand(time(0));  
    cout<<"the ramdom number is 1"<<(1+(rand()%100))<<endl;  
    cout<<"the ramdom number is 2"<<(1+(rand()%100))<<endl;  
    cout<<"the ramdom number is 3"<<(1+(rand()%100))<<endl;  
    cout<<"the ramdom number is 4"<<(1+(rand()%100))<<endl;  
    cout<<"the ramdom number is 5"<<(1+(rand()%100))<<endl;  
    cout<<"the ramdom number is 6"<<(1+(rand()%100))<<endl;  
    cout<<"the ramdom number is 7"<<(1+(rand()%100))<<endl;  
    cout<<"the ramdom number is 8"<<(1+(rand()%100))<<endl;  
    cout<<"the ramdom number is 9"<<(1+(rand()%100))<<endl;  
    cout<<"the ramdom number is 10"<<(1+(rand()%100))<<endl;  
    return 0;  
}
```



```
C:\Users\F228813\Documents\Untitled1.exe  
the ramdom number is 150  
the ramdom number is 284  
the ramdom number is 360  
the ramdom number is 417  
the ramdom number is 532  
the ramdom number is 692  
the ramdom number is 754  
the ramdom number is 840  
the ramdom number is 925  
the ramdom number is 1059  
-----  
Process exited with return value 0  
Press any key to continue . . .
```

Task 2.5:

```
#include <iostream>
```

```
#include <iomanip>
```

```
using std::setfill;
```

```
using std::setw;
```

```
using std::endl;
```

```
using std::cout;
```

```
int main()
```

```
{
```

```
int a = 15;
```

```
int b = 7643 ;
```

```
cout << "12345678901234567890" << endl;
```

```
cout << setw(5) << a << setw(7) << a << setw(8) << "Warm" << endl ;
```

```
cout << setfill('*');
```

```
cout << setw(5) << a << setw(7) << b << setw(8) << "Warm" << endl ;
```

```
cout << setw(5) << a << setw(7) << setfill('#') << b << setw(8) << "Warm" << endl ;
```

```
cout << setw(5) << setfill('@') << a << setw(7) << setfill('#') << b << setw(8) << setfill('^') << "Warm" << endl ;
```

```
cout << setfill(' ');
```

```
cout << setw(5) << a << setw(7) << b;
```

}

C:\Users\F228813\Documents\Untitled1.exe

12345678901234567890

15 15 Warm

\*\*\*15\*\*\*7643\*\*\*Warm

\*\*\*15###7643###Warm

@@@15###7643^^^Warm

15 7643

-----  
Process exited with return value 0

Press any key to continue . . .