Date:

Pattern Programs

1.

```
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
```

```
# include <iostream>
using namespace std;
Int main ( )
{
for (int i=1; i<=5; i++).
{
for (int j=1; j<=5; j++)
{
cout << "*";
}
cout << endl; }
return 0;
}
```

```
1  1  1  1  1
2  2  2  2  2
3  3  3  3  3
4  4  4  4  4
5  5  5  5  5
```

```
#include <iostream>
using namespace std;
int main ( )
{
  for (int i=1 ; i<=5 ; i++ )
  {
   for (int j=1 ; j<=5 ; j++ )
   {
   cout << i << endl;
   }
  return 0;
  }
```

Date: 3

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

```
# include <iostream>
using namespace std;
int main ( )
{
for (int i=1; i<=5; i++)
{
  for (int j=1; j<=5; j++)
  {
  cout << j << endl;
  }
  return 0;
}
```

5	5	5	5	5
4	4	4	4	4
3	3	3	3	3
2	2	2	2	2
1	1	1	1	1

```
# include <iostream>
using name space std;
int main ( )
{
 for (int i=5; i>=1; i++)
 {
  for(int j=1; j<=5; j++)
  {
   cout << i << endl;
  }
 }
 return 0;
}
```

Date: 5

5 4 3 2 1
5 4 3 2 1
5 4 3 2 1
5 4 3 2 1
5 4 3 2 1
5 4 3 2 1

```
# include <iostream>
using namespace std;
int main ( )
{
for(int i=5; i>=1 ; i--)
{
for(int j=5 ; j>=1 ; j--)
{
cout << j << endl;
}
return 0;
}
```

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

```
#include <iostream>
using namespace std;
Int main ( )
{
int n=5 , K = 1
for ( int i = 1 ; i <= n ; i++ )
{
for ( int j = 1 ; j <= n ; j++ )
{
cout << K++ << endl;
}
return 0;
}
```

Date: 7

1	3	5	7	9
11	13	15	17	19
21	23	25	27	29
31	33	35	37	39
41	43	45	47	49

```
#include<iostream>
using namespace std;
int main( )
{
int n = 5 , x = 1 ;
for (int i=1 ; i<=n ; i++)
{
for (int j=1 ; j<=n ; j++)
{
cout << x << endl;
x+ = 2
}
}
return 0;
}
```

2	4	6	8	10
12	14	16	18	20
22	24	26	28	30
32	34	36	38	40
42	44	46	48	50

```
# include <iostream>
using namespace std;
int main ( )
{
int n=5 , x=2;
for (int i=1 ; i<=n ; i++ )
{
for (int j=1 ; j<=n ; j++)
{
Cout << x << endl;
x+2 = x
}
return 0;
}
```

Date: 9

1	2	3	4	5
2	4	6	8	10
3	6	9	12	15
4	8	12	16	20
5	10	15	20	25

```
# include <iostream>
using namespace std;
int main ( )
{
int n = 5;
for (int i=1; i<=n; i++)
{
for (int j=1; j<=n; j++)
{
cout << (j*i) << endl;
}
return 0;
}
```

16

1	2	3	4	5
2	3	4	5	6
3	4	5	6	7
4	5	6	7	8
5	6	7	8	9

```
#include <iostream>
using namespace std;
Int main( )
{
  int n=5;
for(int i=1 ; i<=n; i++)
{
for(int j=1; j<=n; j++)
  {
  Cout << (i+j-1) << endl;
  }
  return 0;
  }
```

Date: 17

1	3	5	7	9
3	5	7	9	11
5	7	9	11	13
7	9	11	13	15
9	11	13	15	17

```
#include <iostream>
using namespace std;
int main ( )
{
  int n = 5;
  for(int i = 1; i<= n ; i++)
  {
  for(int j = 1; j<= n ; j++)
  {
  cout << (2*(i+j) - 3
      }
  Cout << endl;
      }
  return 0;
  }
```

18

0 1 0 1 0
1 0 1 0 1
0 1 0 1 0
1 0 1 0 1
0 1 0 1 0

```
#include <iostream>
using namespace std;
Int main ( )
{
int n = 5
for (int i = 1 ; i <= n ; i++ )
{
for (int j = 1 ; j <= n ; j++)
{
Cout << ((i+j) % 2)
}
cout << endl ;
}
return 0;
}
```

1 1 2 1 3 1
1 2 2 2 3 2
1 3 2 3 3 3
1 2 2 4 3 4
1 5 2 5 3 5

```
#include <iostream>
using namespace std;
Int main ( )
{
for(int i=1; i<=5; i++)
{
for(int j=1; j<=3; j++)
{
Cout << j<<" " << i<<" ";
}
Cout << endl;
}
return 0;
}
```

12

1	6	11	16	21
2	7	12	17	22
3	8	13	18	23
4	9	14	19	24
5	10	15	20	25

```
#include <iostream>
using namespace std;
int main ( )
{
int n = 5;
int x;
for (int i = 1; i <= n; i++)
{
n = i;
for (int j = 1; j <= n; j++)
{
cout << n << " ";
x+ = n
}
return 0;
}
```

Date 19

5	10	15	20	25
4	9	14	19	24
3	8	13	18	23
2	7	12	17	22
1	6	11	16	21

```
# include <iostream>
using namespace std;
int main( )
{
int n=5
int x ;
for( int i= 1; i<=n ; i++)
{ x = n-i+1;
for( int j=1; j<=n ; j++)
{
cout << x << " ";
x = x+n
}
cout << endl;
}
return 0; }
```

30

A B C D E

F G H I J

K L M N O

P Q R S T

U V W X Y

```
# include <iostream>
using namespace std;
int main ( )
{
int n = 5;
char ch = 'A';
for( int i = 1 ; i <= n ; i++ )
{
for (int j = 1 ; j <= n ; j++ )
{
Cout << ch <<
if (ch < 'Z' )
ch++
else
ch = 'A'
Cout << endl; } return 0 ; }
```

DATE

```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

```
#include <iostream>
int main ( )
{
for (int i=1 ; i<=5 ; i++ )
  {
   for (int j=1 ; j<=i ; j++ )
  {
   cout << i;
   }
    cout << endl;
   }
   return 0;
   }
```

DAY: DATE:

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

```
#include <iostream>
int main( )
{
 for (int i=1 ; i<=5 ; i++ )
  {
   for(int j=1 ; j<=i ; j++)
   {
    cout<< j << endl;
   }     }
   return 0;
  }
```

CamScanner

```
5
4 4
3 3 3
2 2 2 2
1 1 1 1 1
```

```
#include <iostream>
int main ( )
{
int n=5;
for(int i=n ; i>=1 ; i--)
{
for(int j=n ; j>=i ; j--)
{
Cout<<i<<endl;
}   }
(Cout)^x
return 0;
}
```

DAY: DATE:

```
5
5 4
5 4 3
5 4 3 2
5 4 3 2 1
```

```
#include <iostream>
int main ( )
{ int n=5;
 for(int i=n; j>=1; j--)
  {
   for(int j=n; j>=i; j--)
{
  Cout << j << endl;
}     }
return 0;
}
```

DATE:

DATE:

```
5
4 5
3 4 5
2 3 4 5
1 2 3 4 5
```

```
#include <iostream>
int main( )
{
 int n=5;
for(int i=n; i>=1; i--)
 {
  for(int j=i; j<=n; j++)
  {
   cout<<j<<endl;
 }    }
 return 0;
 }
```

2

2 4

2 4 6

2 4 6 8

2 4 6 8 10

```
#include <iostream>
int main ( )
{
 int n=5;
for(int i=1 ; i<=5 ; i++ )
{
 for (int j=1 ; j<=i ; j++ )
{
 cout<< j*2 << endl;
}      }
return 0;
}
```

DATE:

```
1
1 0
1 0 1
1 0 1 0
1 0 1 0 1
```

```
#include <iostream>
int main ( )
{
 int n = 5;
 for(int i=1; i<=n ; i++)
 {
  for(int j=1 ; j<=i; j++)
 {
  cout << (j%2) << endl;
 }   }
 return 0;
 }
```

0

0 1

0 1 0

0 1 0 1

0 1 0 1 0

0 1 0 1 0 1

```
#include <iostream>
int main ( )
{
  int n= 5;
  for(int i=0; i<n ; i++)
  {
  for(int j=0; j<=i; j++ )
{
  cout << (j%2)<<endl;
  }    }
  return 0;
}
```

DATE:

DAY:

```
0
1 0
0 1 0
1 0 1 0
0 1 0 1 0
```

```
#include <iostream>
int main ( )
{
 int n=5;
 for(int i=1; i<=n; i++)
 {
  for(int j=1; j<=i; j++)
  {
   cout<<(i+j)%2)<<endl;
 }  }
 return 0;
 }
```

DATE

```
1
0 1
1 0 1
0 1 0 1
1 0 1 0 1
```

```
#include <iostream>
int main( )
{
  int n=5;
  for(int i=1; i<=n; i++ )
{
  for(int j=0; j<i; j++ )
{
  Cout<<((i+j)%2) <<endl;
}
}
return 0;
}
```

DATE:

DAY:

A
B B
C C C
D D D D
E E E E E

```
#include <iostream>
int main ( )
{
 for(int i='A'; i<='E'; i++ )
{
 for( int j='A'; j<=i; j++ )
 {
  Cout << char(i) << endl;
 }    }
 return 0;
}
```

```
A
A B
A B C
A B C D
A B C D E
```

```
#include <iostream>
int main ( )
{
for(int i='A'; i<='E'; i++)
{
for(int j='A'; j<=i ; j++)
{
cout << char(j) << endl;
}  }
return 0;
}
```

DAY:

```
1 1 1 1 1
1 1 1 2
2 2 2
3 3 3
4 4
5
```

```
#include <iostream>
int main( )
{
for(int i=1; i<=5; i++)
{
for(int j=5; j>=i; j--)
{
cout << i << endl;
} }
return 0;
}
```

```
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```

```
#include <iostream>
int main ( )
{
for(int i=5 ; i>=1 ; i--)
{
for(int j=1 ; j<=i ; j++ ) ;
{
cout << j << endl;
}  }
return 0 ;
}
```

DATE:

DATE:

```
5 5 5 5 5
4 4 4 4
3 3 3
2 2
1
```

```
#include <iostream>
int main( )
{
for(int i=5; i>=1; i--)
{
for(int j=1; j<=i; j++)
{
cout << i<<endl;
} }
return 0;
}
```

DAY: DATE:

5 4 3 2 1
5 4 3 2
5 4 3
5 4
5

```
#include <iostream>
int main ( )
{
for(int i= 1 ; i<=5 ; i++)
{
for( int j=5 ; j>=i ; j--)
{
cout << j << endl;
} }
return 0;
}
```

Date:

1 1 1 1 1
0 0 0 0
1 1 1
0 0
1

```
#include <iostream>
int main ( )
{
for(int i=1 ; i<=5 ; i++ )
{
for( int j=5 ; j>=i ; j--)
{
cout << (i%2) << endl;
}  }
return 0 ;
}
```

0 0 0 0 0
1 1 1 1
0 0 0
1 1
0

```
#include <iostream>
int main ( )
{
  for(int i=0 ; i<5 ; i++)
{
for(int j=5 ; j>i ; j--)
{
cout << (i%2)<<endl;
}  }
return 0 ;
}
```

Ans

1 0 1 0 1
1 0 1 0
1 0 1
1 0
1

```
#include <iostream>
int main ( )
{
for(int i=5 ; i>=1 ; i--)
{
for(int j=1 ; j<=i ; j++)
{
cout<<(j%2)<<endl;
}}
return 0;
}
```

DAY: DATE:

0 1 0 1 0
0 1 0 1
0 1 0
0 1
0

```
#include <iostream>
int main ( )
{
 for(int i=5 ; i>=1 ; i--)
 {
 for(int j=0 ; j<i ; j++)
 {
  cout << (j % 2) << endl;
 } }
 return 0 ;
 }
```

DATE:

DAY:

0 1 0 1 0
1 0 1 0
0 1 0
1 0
0

```
# include <iostream>
int main ( )
{
for (int i=5 ; i>=1 ; i--)
{
for (int j=1 ; j<=i ; j++)
{
Cout<<((i+j)%2) << endl;
}  }
return 0;
}
```

DAY: DATE:

1 0 1 0 1
0 1 0 1
1 0 1
0 1
1

```
#include <iostream>
int main ( )
{
for(int i=5; j>=1; j--)
{
for (int j=0; j<i ; j++ )
{
Cout << ((i+j)%2 ) << endl;
}
}
return 0;
}
```

DATE:

DAY:

```
        1
      2 2
    3 3 3
  4 4 4 4
5 5 5 5 5
```

```
#include <iostream>
int main ( )
{
  int i, j, k, n=5;
for(int i=1; i<=n; i++)
  {
  for(int j=n-1; j>=i; j--)
  {
  cout << " ";
  }
  for(int k=1; k<=i; k++)
  {
   cout << i << endl; }
  }
return 0;
}
```

```
        1
      1 2
    1 2 3
  1 2 3 4
1 2 3 4 5
```

```
#include <iostream>
int main ( )
  {
   int i, j, k , n=5 ;
  for(int i=1 ; i<=5 ; i++ )
  {
   for( int j= n-1 ; j>=i ; j--)
   {
   cout " ";
   }
  }
  for( int k=1 ; k<=i ; k++ )
   {
    cout << k << endl;
  }  }
  return 0;
   }
```

```
        5
      4 4
    3 3 3
  2 2 2 2
1 1 1 1 1
```

```
#include <iostream>
int main ( )
{
 for(int i=5 ; i>=1 ; i--)
 {
  for(int j=1 ; j<=n ; j++)
  {
   if(i<=j)
    cout << i;
    else
    cout << " ";endl;
  }  }
 return 0;
}
```

```
        5
      4 5
    3 4 5
  2 3 4 5
1 2 3 4 5
```

```
#include <iostream>
int main ( )
{
for(int i=5 ; i>=1 ; i--)
{
for(int j=1 ; j<=n ; j++)
{
if (i<=j)
cout << j ;
else
cout << " " << endl;
} }
return 0 ;
}
```

DATE

```
        1
      2 1
    3 2 1
  4 3 2 1
5 4 3 2 1
```

```
#include <iostream>
int main ( )
{
for(int i=1 ; i<=n ; i++ )
{
for(int j=n ; j>=1 ; j--)
{
if(i>=j)
cout<< j ;
else
cout<<" "<< endl;
} }
return 0;
}
```

```
5 5 5 5 5
  4 4 4 4
    3 3 3
      2 2
        1
```

```
#include <iostream>
int main ( )
{   n=5;
for(int i=n; i>=1; i--)
{
for(int j=n-1; j>=i; j--)
{
cout << " ";
}
for(int k=1; k<=i; k++)
{
cout << i << endl; }
}
return 0;
}
```

DAY:

```
1 2 3 4 5
  1 2 3 4
    1 2 3
      1 2
        1
```

```
#include <iostream>
int main( )
{
int n=5;
for(int i=n; i>=1; i--)
{
for(int j=n-1; j>=i; j--)
{
cout<<" ";
}
for(int k=1; k<=i; k++)
{
cout<<k<<endl;
}
}
return 0;
}
```

DATE:

```
1 1 1 1 1
  2 2 2 2
    3 3 3
      4 4
        5
```

```
#include <iostream>
int main ( )
{
 int n=5 ;
for(int i=1 ; i<=n ; i++ )
{
for( int j=1 ; j<=n ; j++ )
{
  if (i<=j)
  Cout << i ;
else
  cout << " " << endl;
  } }
return 0 ;
}
```

DAY: DATE:

```
1 2 3 4 5
  2 3 4 5
    3 4 5
      4 5
        5
```

```
#include <iostream>
int main ( )
{
 int n= 5 ;
 for(int i=1 ; i<=n ; i++)
 {
  for(int j=1 ; j<=n ; j++)
  {
   if (i<=j)
    cout << j
   else
    cout << " " << endl;
  } }

 return 0 ;
}
```

DATE:

```
5 4 3 2 1
  4 3 2 1
    3 2 1
      2 1
        1
```

```
#include <iostream>
int main ( )
{ int n=5;
for(int i=5; i>=1; i--)
{
for(int j=n; j>=1 ; j--)
{
if(i>=j)
{
cout << j;
}
else
cout << " " << endl;
} }

return 0 ;
}
```

DAY:

1	1	2	1	3	1
1	2	2	2	3	2
1	3	2	3	3	3
1	2	2	4	3	4
1	3	2	5	3	5

```
#include <iostream>
int main( )
{
for(int i=1; i<=5; i++)
{
for(int j=1; j<=3; j++)
{
cout<< j<<" " << i<< " "<<endl;
}  }
return 0;
}
```

DATE:

1	1	1	2	1	3
2	1	2	2	2	3
3	1	3	2	3	3
4	1	4	2	4	3
5	1	5	2	5	3

```
#include <iostream>
int main( )
{
 for(int i=1; i<=5; i++)
{
for(int j=1; j<=3; j++)
{
cout << i << " " << j << endl;
} }

return 0;
}
```

DAY: DATE:

1	6	11	16	21
2	7	12	17	22
3	8	13	18	23
4	9	14	19	24
5	10	15	20	25

```
#include <iostream>
int main ( )
{
  int x, n=5;
 for(int i=1; i<=n; i++)
  { x=i;
   for(int j=1; j<=n; j++)
   {
    cout << x << ;
     x+=n;
   }
   cout << endl;
  }
 return 0;
  }
```

1	10	11	20	21
2	9	12	19	22
3	8	13	18	23
4	7	14	17	24
5	6	15	16	25

```
#include <iostream>
int main( )
{
  int n=5;
  int x, y;
  for(int i=1; i<=n; i++)
  {
    x=i ; y=n-i+1;
  for (int j=1; j<=n; j++)
  {
  if(j%2==1)
  { cout << x<<
  else
    Cout << y <<
  }
  x=x+n , y=y+n ;
```

DATE:

DAY:

```
}  }
return 0;
}
```

5	10	15	20	25
4	9	14	19	24
3	8	13	18	23
2	7	12	17	22
1	6	11	16	21

```
#include <iostream>
int main ( )
{
int x , n=5;
for(int i=1 ; i<=n ; i++ )
{
x= n-i+1;
for(int j=1 ; j<=n; j++)
{
Cout<<x<<;
x=x+n;
}  return 0 ;  }
```

5	6	15	16	25
4	7	14	17	24
3	8	13	18	23
2	9	12	19	22
1	10	11	20	21

```
#include <iostream>
int main ( )
{
int x, y, n = 5;
for(int i = 1; i <= n; i++)
{
  x = i ,  y = n-i+1;
for(int j = 1; j <= n; j++)
{
if (j % 2 == 0)
{
cout<<x<<; }
else {
cout<< y<< ; }
x = x+n;
y = y+n; }
```

DAY: DATE:

```
cout << endl;
}
return 0;
}
```

1 0 1 0 1
0 1 0 1 0
1 0 1 0 1
0 1 0 1 0
1 0 1 0 1

```
#include <iostream>
int main( )
{
int n;
for(int i=1; i<=n; i++)
{
for(int j=0; j<n; j++)
{
cout << (i+j) % 2) << endl;
} }
return 0;
}
```

DAY: _____

1	0	1	0	1
0	0	0	0	0
1	0	1	0	1
0	0	0	0	0
1	0	1	0	1

```
#include <iostream>
int main ( )
{ int n 5;
for(int i=1; i<=n; i++)
{
for(int j=1; j<=n; j++)
{
Cout << (i+j) % 2 << endl;
}
return 0;
}
```

DATE: DATE:

0	1	0	1	0
0	0	0	0	0
0	1	0	1	0
0	0	0	0	0
0	1	0	1	0

```
#include<iostream>
int main( )
{
  int n=5;
for(int i=1; i<=n; i++)
  {
   for(int j=0; j<n; j++)
{
  cout<<(i*j) % 2)<<endl;
}  }
  return 0;
  }
```

```
1 0 1 0 1
1 0 1 0 1
1 0 1 0 1
1 0 1 0 1
1 0 1 0 1
1 0 1 0 1
```

```
#include<iostream>
int main ( )
{
 int n=5;
for(int i=1; i<=n; i++)
{
 for(int j=1; j<=n; j++)
 {
  cout<<(j%2)<<endl;
} }

return 0;
}
```

Date

```
A B C D E
A B C D E
A B C D E
A B C D E
A B C D E
A B C D E
```

```
#include <iostream>
int main( )
{
  char ; i, j ;
  for(int i='A' ; i<='E' ; i++)
  {
   for(int j='A' ; j<='E' ; j++)
   {
    cout << char(j) ;
   }
   cout<<endl;
  }
  return 0 ;
}
```

DATE:

```
E E E E E
D D D D D
C C C C C
B B B B B
A A A A A
```

```
#include <iostream>
int main ( )
{
char i, j ;
for(int i='E'; i>='A'; i--)
{
for(int j='E'; j>='A'; j--)
{
cout << char(i);
}
cout << endl;
}
return 0;
}
```

```
*
* *
* * *
* * * *
* * * * *

#include <iostream>
int main ( )
{
for (int i=1; i<=5; i++)
{
for (int j=1; j<=i; j++)
{ cout << "*";
}
cout<< endl;
}
return 0;
}
```

Date:

2

```
*
* *
* * *
* * * *
* * * * *

#include <iostream>
int main ( )
{
int n = 5
int j, i, k
for (int i = 1; i <= n; i++ )
{
for (int j = n-1 ; j >= i ; j--)
{
cout << " ";
}
for (int k = 1 ; k <= i ; k++ )
{
Cout << "*";
}
```

space

```
cout << endl;
}
return 0;
}
```

3

```
* * * * *
* * * *
* * *
* *
*
```

```
#include <iostream>
int main ( )
{
for (int i=1 ; i<=5 ; i++)
{
for (int j=5 ; j>=i ; j--)
{
cout << "*";
```

```
for (int i=5;i>=1
;i
{
for (int j=1; j<=i ;j
```

Date:

```
}
cout << endl;
}
return 0;
}
```

4

```
* * * * *
  * * * *
    * * *
      * *
        *
```

```
# include <iostream>
int main ( )
{
int n = 5
int i, j, k
for (int i = n ; i >= 1 ; i--)
{
for (int j = n-1 ; j >= i ; j--)
```

```
}
cout << " ";
}
for ( int k = 1 ; k <= i ; k++ )
{
cout << "A" ;
}
cout << endl;
}
return 0 ;
}
```

5 cout << "A" ;

Other Programs
General Utility Programs

1. Hello C++

```
#include <iostream>
#include <conio.h>
Void main( )
{
clrsc( );
Cout << "Hello From C++";
getch( )
}
```

Hellow From C++

2. Even / Odd

```
#include <iostream>
#include <conio.h>
Void main( )
{
clrsc( );
```

Date:

```
int x;
cout<< "Enter an integer";
cin>> x;
if( x % 2 == 0)
cout<< "Number is even";
else
cout << " Number is odd";
get ch ();
}
```

3. Factorial

```
#include <iostream>
void main ( )
{
int i, n, fact = 1;
cout<< 'Enter a number";
cin>> n;
for (i=1; i<=n; i++)
{
fact = fact * i;
}
```

Date:

```
cout << "Factorial of" << n <<
"is" << fact << endl;
}
```

4. factorial (Using function)

```
#include <iostream>
#include <conio>
long int factorial (int n);
void main ( )
{
  int n;
  clrscr ( );
  cout << "Enter a number\n";
  cin >> ;
  cout << "Factorial of" << n << "is"
  << factorial (n) ;
  getch ( );
}
```

```
long int factorial (int n)
{
if (n==1)
{
return (1);
}
else
{
n= n* factorial (n-1)
return (n);
}
}
```

5.

```
#include <iostream>
void main ( )
{
int i, n;
int count = 0;
```

Date:

```
cout << "Enter a number";
cin >> n;
for(i=1; i<=n; i++)
{
 if(n%i == 0)
 {
  count ++
 }
 }
 if(count == 2)
 {
  cout<<n<< "is a prime n";
 }
 else
 cout<<n<< "is Not P-N";
 }
}
```

7.

```
#include <iostream.h>
#include <conio.h>
void main( )
{
int max_num (int a, int n);
int max, i, n;
int a;
clrscr( );
cout << "Enter n number";
cin >> n;
cout << "Enter the numbers";
for (i=0; i<=n; i++)
cin >> a;
max = max_num (a, n);
cout << "The larges number
        is" << max;
get ch( );
}
int max_num( int a, int n)
{
```

Date:

```
int i, m = 0
for (i=0; i<n; i++)
{
  if (a>m)
  m = a
}
return m;
}
```

3.

```
#include<iostream>
int main ( )
{
  int x, y, temp;
Cout<< "Ente the value of
      x and y /n";
Cin>> x >> y;
Cout " Before Swapping /n x
=" << x"/n y = " << y << endl;
temp = x;
x = y;
y = temp;
```

Date:

```
cout << "After swapping for x =
" << x << " << endl;
return 0;
}
```

10

```
#include <iostream>
#include <conio.h>
void main ( )
{
clrscr ( );
int 1st number = 0;
int 2nd No = 1;
int result, user-no, count = 0
cout << "Enter any number";
cin >> n
while (1)
{
result = 1st No + 2nd No;
count ++;
```

```
if (result == usco - no)
{
  break;
}
1st - No = Second - no;
Second no = result;
Cout << "\n Fibonici No. " << count <<
-> " << result;
}
getch();
}
```

11

```
#include <iostream>
#include <string>
Void main( )
{
char a, b;
Cout << "Enter the string to
        check if it is
        a pulidrom\n
Cin >> a;
```

Date:

```
strcpy(b,a);
strrev(b);
if (strcmp(a,b) == 0)
cout << "Entex string palidrome;
else
cout << "Entered string is not
        palidrome"
}
```

13

```
#include <iostream>
#include <conio.h>
void main( )
{
clrscr( );
int Year;
cout << "Entex the YEAR";
Cin >> Year;
if (Year % 400 == 0)
{
cout << Year << "is leap Year";
}
```

```
else if (Year % 100 == 0)
{
cout << Year << " is not a
        leap Year";

}
else if (Year % 4 == 0)
{
cout << Year << " is leap Year";
}
else
{
cout << Year << " is not leap Year";
}
getch();
}
```

14

```
#include <iostream>
int main( )
{
int n, i, sum = 0
cout << "Enter a number";
```

Date:

```
cin>>n;
while (i<n)
{
    if (n%i==0)
        sum=sum+i;
        i++;
}
if (sum==n)
    cout<<"is perfect N";
else
    cout<<"is not perfect";
    return 0;
}
```

Perfect
mean Proper
divide
6 is devide
1,2,3 =>
Sum = 1+2+3
= 6
Proper

15

```
#include <iostream>
#include <conio>
void main( )
{
clrscr( );
int num, temp, sum, i=1, n=0
cout << "Enter number";
cin>> num;
```

Date

```
Sum = 0;
i = num;
while (num > 0)
{
  n = num % 10;
  num = num / 10;
  sum = sum + (n*n*n)
}
if (sum == i)
{
  cout << "\n" << i << " ARMSTRONG";
else
cout << "\n" << i << " not ARMSTRONG
}
  getch();
}
```

753

$(1)^3 + (5)^3 + (3)^3$

$1 + 125 + 27$

153

Ifny number ko gy whi Power ko gi if 1234

$(1)^4 + (2)^4 + (3)^4 + (4)^4$

Date

16

```
# include <iostream>
void main( )
{
int num, i, p, r, Sum = 0, Save;
cout << " Enter a number";
cin >> num;
Save = num;
{
i = 1, p = 1
r = num % 10
while( i <= r)
{
p = p* i;
i++
}
Sum = Sum + p
num = num/10
}
if ( Sum = Save - N)
```

```
cout << Sum << " is strong No";
else
cout << Sum << " is not strong No;
}
```

17

```
#include <iostream>
void main( )
{
 int n, Sq, Sum=0;
 Cout << "Enter number";
 Cin>>n;
 Sq = n*n;
while (sq>0)
{
 Sum = Sum+Sq%10;
   Sq = Sq/10;
(Sum = Sum + Sq %)^x
}
 if (Sum==n)
 cout<<n<< " non IV";
```

Date

```
else
cout << " not perfect N";
return 0;
}
```

n = 9

9 * 9 = 81

Sum = Sum + 1

Sq = 8

8 + 1 = 9

Sum = n

9 is perfect N.

19

```
# include <iostream>
int main ( )
{
int n, Sum = 0, product = 1
int d;
cout << " Enter number";
cin >> n;
```

Date:

```
while(n>0)
{
  d = n%10;
Sum = Sum + d;
Product = Prdt * d;
n = n/10;
}
if (Sum == Prdt)
Cout << "Given N Spy N";
else
Cout << " Given N Not Spy N";
  return 0;
}
```

20

```
# include <iostream>
int main( )
{
int num temp sum
Cout << "Enter number";
Cin >> num;
```

Date:

```
while ( Sum != 1 && Sum != 4 )
  {  Sum = 0;
  while (num > 0)
    {
      temp = num % 10;
      Sum = (temp * temp);
      num = num / 10;
    }
    num = Sum;
  }
  if ( Sum == 1 )
  cout << " Happy Number";
  else
  cout << " unHappy Num";
    return 0;
  }
```

Date:

21

```
#include <iostream>
#include <math.h>
int main( )
{
  int num;
  double x; // sqrt (num+1)
  Cout << "Enter a Number";
  cin>> num;
  x = sqr (num+1)
  if( int x == x )
  {
  cout << num << " is Sunny N";
  }
  else
   Cout << num << " NOT Sunny";
   }
    return 0;
   }
```

```
#include <iostream>
void main ( )
{
    int n; // limit
    int cn; // current no
    int i,j; // loop
    long int fact;

    cout << "Enter number";
    cin>> n;
    cout << "In factorial of number
        b/w 1to n " << n << "
    cout << " Number: factorial
                    endl;

    for(i=1;i<= n;i++)
    {
     cn = 1
     fact = 1
     for(j=1,j<=cn;j++)
```

Date

```
}
fact = fact * i;
}
cout << << "start << code;
}
```

28

```
# include <iostream>
void main ( )
{
int n;
int cn;
int i,j;
int count;
cout << " Enter number";
Cin >> n;
Cout << "\n list of prime
    numbers b/w 1 to
" << n << " ";
for (i = 1; j <= n; i++)
{
Cn = i
```

```
count = 0;
for (j = 1; j<=n; j++)
{
if (n%j == 0)
{
count ++
}
}
if (count == 2)
{
cout << n << endl;
}
}
```

66

```
#include <iostream>
int main ()
{
int l,w,h;
int volume
```

Date:

```
cout << "Enter length, width
        and height";
cin >> l >> w >> h;
Volume = l x w x h;
cout << "In Volume of cuboid"
     << Volume;
return 0;
}
```

l x h x w

★ Volume = 10 x 5 x 4

200

65:

```
# include <iostream>
int main ( )
{
float r, h;
float Volume;
cout << "Enter radius of cone";
cin >> r;
```

Date:

```
Cout << "Enter heigh";
Cin>> h;
Volume = π r²h/3
Cout "\n Volume of cone is:
<< Volume;
return 0;
}
```

$\pi r^2 h/3$

★ Volume = 3.141 * r * r * h/3

= 3.141 * 5 * 5 * 8/3

= 209.4

64

```
# include <iostream>
int main ( )
{
float radius;
float Volume;
Cout << "Enter radius of
hemisphere";
```

Date:

```
Cin>> radius
Volume = 2
Cout "\n Vo
is" <<
return
}
```

★ Volu

63

Cin >> radius;

Volume = 2πr/3

Cout "In Volume of hemisphere is" << volume;

return 0;

}

* volume = $\frac{2(3.141)(r)}{3}$

= $\frac{2(3.142)(5)}{3}$

= 10.467

63

include <iostream>

int main ( )

float radius;

float volume;

Cout << 'Enter radius of sphere';

Cin >> radius;

Date:

Volume = $\frac{4\pi r^3}{3}$

Cout << "\n Volume of sphere:
<< Volume;
return 0;
}

• Volume = $\frac{4(3.141)(2)(2)(2)}{3}$

= 33.493

62

include <iostream>
include <math.h>
int main ( )
{
int b1, b2, h;
float area;
Cout << "\n Enter value of bases:
Cin >> b1 >> b2;

Cout << "\n
Cin >> h;
area = (b1
Cout << "Ar
return
}

• area

61

Date

```
cout << "Enter value of
        height";
cin>> h;
area = (b1 + b2) * h / 2;

cout << "Area" << area;
return 0;
}
```

* area = $(\overset{b_1}{5} + \overset{b_2}{10}) * \overset{h}{12} / 2$

90

61

```
#include <iostream>
#include <Math.h>
int main( )
{
int side
float area
cout << "Enter lenght of side";
cin>> side;
```

Date:

```
area = 2*(1+Sqrt(2))*Side*Side
Cout << "Area of Regular
        Octagon" << area;
return 0;
}
```

Area = 2*(1+Sqrt(2))* 3*3.

60

```
# include <iostream>
int main ( )
{
int Side, Perimeter;
float apothem;
float area;
Cout << "Enter the Value
        of Side";
Cin >> Side;
Cout << "Enter the Value
        of Apothem";
Cin>> apothem;
```

Date

```
perimeter = 7*
area = (Perime
Cout << "Area
        Hepta
return
}
Side =
area =
= 1
```

59

```
# in
# i
int
{
int
fl
Cout
Ci
```

```
perimeter = 7 * Side
area = (Perimeter * apothem)/2 ;
Cout << "Area of Regular
        Heptagon " << area ;
return 0;
}
```

Side = 7 => Perimeter = 7*7

area = 49 * 7.4/2

= 181.3

59

```
# include <iostream>
# include <math.h>
int main( )
{
int Side
float area;
Cout << "In Enter the length
        of Side" ;
Cin >> Side;
```

Date:

```
area = (3* Sqrt(3)* Side* Side)/2;
Cout << "Area of Hexagon"
     << area;
return 0;
}
```

* side = 3
  area = 3* Sqrt(3)* 3 * 3 /2

58

```
# include <iostream>
# include <math.h>
int main ( )
{
int side;
float area;
Cout << "Enter length. side";
Cin >> side;
area = (Sqrt (5* (5* 2 × Sqrt (5)))
        * Side * Side / 4;
```

Date:

```
cout << "Area of Regular Pentagon"
     << area;
return 0;
}
```

* Side = 3

area = (sqrt(5*(5+2*sqrt(5)))*3*3)/4

57

```
#include <iostream>
#include <math.h>
int main()
{
  int d1, d2;
  float area;
cout << "Enter the value
      of diagonals (D1 and D2)";
cin >> d1 >> d2;
area = (d1*d2)/2;
cout << "Area of Rhombus" << area;
  return 0;
}
```

Date:

- $D_1 = 10$, $D_2 = 20$

area = $(D_1 * D_2)/2$

100

56

```
# include <iostream>
int main ( )
{
int Side, area;
Cout << "Enter the length
        of Side";
cin >> side;
area = side * side;
Cout << "Area of square" << area;
return 0;
}
```

- Side = 4

Area = side * side

= 4 × 4 => 16

Date: 55

```
# include <
# include <
int main
{
int
Cout << " E
Cin >> l
Cout <
Cin
a
C
```

Date

55

```
#include <iostream>
#include <conio.h>
int main ( )
{
  int length, breadth, area;
Cout << "Enter the length
        of Rectangle";
Cin>> length;
Cout << "Enter the Breadth of
        Rectangle";
Cin>> breadth;
  area = length * breadth;
Cout << "Area of Rectangle"
        << area;
  return 0;
}
```

length = 6

Breadth = 4

area = 24

Date:

54

```
#include <iostream>
#include <math.h>
int main( )
{
    int side;
    float area;
Cout << "Enter the length
                of side";
Cin >> side;
area = (sqrt(3)*(side*side))/4;
Cout << "Area of Equilateral
                Triangle" << area;
return 0;
}
```

length = 5

Area = 10.85

53

```
# include <iostream>
# include <math.h>
int main ( )
{
  int b, h;
  float area;
  Cout << Enter the value of
        breadth and height";
Cin>> b>>h;
  area = (b*h)/2
Cout <<" Area of triangle" << area;
  return 0;
}
```

52

```
# include <iostream>
int main ( ) {
int radius;
float area;
```

Date:

```
cout << "Enter Radius of circuit";
cin >> r;
area = π r^2;
cout << "Area of circuit" << area;
return 0;
}
r = 5
Area = (3.141)(5)(5)
= 78.5.
```

51

```
#include <iostream>
int main( )
{
int radius;
float cir;
cout << "Enter Radius of
circuit";
cin >> r;
cir = 2πr;
cout << "circumstance of
circuit" << cir;
```

return 0;

}

r = 5

cir = 31.4

CamScanner