Assignment 3

1.
```
#include <stdio.h>
int main() {
  int x;
  scanf("%d", &x);
  if (x>0)
    printf("Positive");
  else
    printf("non-positive");
  return 0;
}
```

2.
```
#include <stdio.h>
int main() {
  int x = 125;
  if (x%5 == 0)
    printf("divisible by 5");
  else
    printf("not divisible by 5");
  return 0;
}
```

3.
```
#include <stdio.h>
int main() {
  int x = 123;
  if (x%2 == 0)
    printf("even number");
  else
    printf("odd number");
  return 0;
}
```

4.
```
#include <stdio.h>
int main() {
  int x = 5;
  if (x&1 == 0)
    printf("even");
  else
    printf("odd");
  return 0;
}
```

5.
```
#include <stdio.h>
int main() {
  int x = 123;
  if (x > 99 && x <= 999)
    printf("three digit number");
  else
    printf("not three digit number");
  return 0;
}
```

6.
```
#include <stdio.h>
int main() {
  int a = 10, b = 9;
  if (a >= b)
    printf("Greater");
  else
    printf("smaller");
  return 0;
}
```

7.
```
#include <stdio.h>
int main() {
int a=5, b=6, c=7;
int d = b*b - 4*a*c;
if (d>0)
   printf("Real and distinct");
else if (d==0)
   printf("Real and equal");
else
   printf("imaginary");
return 0;
}
```

8.
```
#include <stdio.h>
int main() {
 int year;
scanf("%d", &year);
if (year % 400 == 0)
    printf("leap year");
else if (year % 100 == 0);
    printf("not leap year");
else if (year % 4 == 0);
    printf("leap year");
else
    printf("not leap year");
return 0;
}
```

9.
```
#include <stdio.h>
int main() {
 int a, b, c;
scanf("%d %d %d", &a, &b, &c);
if (a >= b && a >= c)
    printf("%d is greatest", a);
else if (b >= a && b >= c)
    printf("%d is greatest", b);
else
    printf("%d is greatest", c);
return 0;
}
```

10.
```
#include <stdio.h>
int main() {
 int cost, sell;
 float profit, loss;
scanf("%d %d", &cost, &sell);
if (cost > sell) {
   loss = (cost - sell) / cost * 100;
   printf("%f", loss);
else {
   profit = (sell - cost) / cost * 100;
   printf("%f", profit);
}
return 0;
}
```

11.
```
#include <stdio.h>
int main() {
 int a, b, c, d, e;
scanf("%d %d %d %d %d", &a, &b, &c, &d,
if (a>=33 && b>=33 && c>=33 && d>=
        && e>=33)
   printf("pass");
else
   printf("fail");
```

12.
```
#include <stdio.h>
int main( ) {
.char ch ;
scanf ("%c", &ch);
if ( ch >= 97 && ch <= 122)
    printf (" lowercase ");
else if ( ch >= 65 && ch <= 90)
    printf (" Uppercase " );
else
   printf (" special character");
return 0 ;
}
```

13.
```
#include <stdio.h>
int main ( ) {
int x = 12 ;
if ( x %. 3 == 0 && x %. 2 == 0)
    printf (" divisible by 3 and 2 ");
else
  printf (" not divisible " );
return 0 ;
}
```

14.
```
#include <stdio.h>
int main ( ) {
int x = 21 ;
if ( x % 7 == 0 || x %. 3 == 0)
  printf (" divisible by 7 or 3 " );
else
  printf (" not divisible ");
return 0 ;
}
```

15.
```
#include <stdio.h>
int main ( ) {
 int x = 2 ;
 if ( x > 0)
    printf (" positive " );
 else if ( x < 0)
    printf (" negative " );
 else
   printf (" zero " );
 return 0 ;
}
```

16.
```
#include <stdio.h>
int main ( ) {
 char ch = 'F' ;
 if ( ch >= 97 && ch <= 122)
   printf (" lowercase " ) ;
 else if (ch >= 65 && ch <= 90)
   printf (" Uppercase " );
 else if (ch >= '0' && ch <= '9')
   printf (" digit " ) ;
 else
   printf (" special character " ) ;
return 0 ;
}
```

17.
```
# include <stdio.h>
int main ( ) {
  int a, b, c ;
scanf ("%d %d %d", &a, &b, &c);
if ( a+b > c && b+c > a && a+c > b )
    printf (" Triangle " );
else
   printf (" not a triangle " ) ;
return 0 ;
}
```

15.)
```
#include <stdio.h>
int main( ) {
 int m;
 scanf("%d", &m);
 if (m==1 || m==3 || m==5 || m==7 || m==8 || m==10 || m==
      printf("31 day");
 else if (m==4 || m==6 || m==9 || m==11)
      printf("30 days");
 else
      printf("28 days");
return 0;
}
```