Practice Lab Assignment

1. A palindrome is a number or a text phrase that reads the same backward as forward. Example, each of the following 5-digit integers is a palindrome: 12321, 55555, 45554, 11611.
   Write a program that reads a five digit integer and determines whether or not it's a palindrome. [Hint: use '%' and '/' operators to separate individual digits.]

2. Assume integer i = 1, j=2, k=3 and m=2. What does each of the following statements print?
   - I.   printf("%d", i = = 1);
   - II.   printf("%d", j = = 3);
   - III. printf("%d", i > = 1 && j < 4);
   - IV.   printf("%d", m <= 99 && k < m);
   - V.   printf("%d", j > = 1 || k = = m);
   - VI.   printf("%d", k+m < j || 3 − j > = k);
   - VII. printf("%d", !m);
   - VIII. printf("%d", !(j - m));
   - IX.   printf("%d", !(k > m));
   - X.   printf("%d", !(j > k));

3. If the ages of Ram, Shyam and Ajay are input through the keyboard, write a program to determine the youngest of the three using ternary operator '?:'.

4. Any character is entered through the keyboard, write a program to determine whether the character entered is a capital letter, a small letter, a digit or a special symbol using switch statement with if-else.

Character	ASCII Values
A-Z	65-90
a-z	97-122
0-9	45-57
Special symbols	0-47, 58 – 64, 91-96, 123-127

5. Write a program to print this triangle:

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

Hint: Use while loop

```
initialize loop counter;
while ( test loop counter using a condition )
 {
   do this;
   and this;
   increment loop counter;
 }
```

6. Write a menu driven program (using switch) which has following options:
   I.   Odd or even
   II.   First number is multiple of the second number or not.
   III. Sum of digits of a given number is odd or even
         Once a menu item is selected the appropriate action should be taken.

7. Write a program to find number of days in a month using switch statement.