## 1. Reverse the words in the sentence

```java
import java.util.Scanner;
class ReverseWord
{
        public static void main(String[] args)
        {
                Scanner sc=new Scanner(System.in);
                System.out.println("Enter your sentence:");
                String st=sc.nextLine();
                char ch[]=st.toCharArray();
                st="";
                for (int i=0;i<ch.length ;i++ )
                {
                        int k=i;
                        while (i<ch.length && ch[i]!=' ')
                        {
                                i++;
                        }
                        int j=i-1;
                        while (j>=k)
                        {
                                st=st+ch[j];
                                j--;
                        }
                        if (i<ch.length)
                        {
                                st=st+ch[i];
                        }
                }
                System.out.println(st);
        }
}
```

**OUTPUT:**

Enter your sentence:

reversing each word

gnisrever hcae drow

## 2. Reverse the sentence

```java
import java.util.Scanner;
class ReverseScentence
{
        public static void main(String[] args)
        {
                Scanner sc=new Scanner(System.in);
                System.out.println("Enter your sentence:");
                String st=sc.nextLine();
                char ch[]=st.toCharArray();
                st="";
                for (int i=ch.length-1 ; i>=0 ; i-- )
                {
                        int k=i;
                        while (i>=0 && ch[i]!=' ')
                        {
                                i--;
                        }
                        int j=i+1;
                        while (j<=k)
                        {
                                st=st+ch[j];
                                j++;
                        }
                        if(i>=0)
                                st=st+ch[i];
                }
                System.out.println(st);
        }
}
```

## OUTPUT:

Enter your sentence:

this to reverse the scentence

scentence the reverse to this

### 3. Count number of words in sentence

```java
import java.util.Scanner;
class WordCount
{
        public static void main(String[] args)
        {
                Scanner sc=new Scanner(System.in);
                System.out.println("Enter your sentence:");
                String st=sc.nextLine();
                char ch[]=st.toCharArray();
                int count=0;
                for (int i=0;i<ch.length ;i++ )
                {
                        if(i==0 && ch[i]!=' ' || ch[i]!=' ' && ch[i-1]==' ')
                                count++;
                }
                System.out.println("Number of words in sentence:"+count);
        }
}
```

**OUTPUT:**

Enter your sentence:

count of the words in scentence

Number of words in sentence:6

### 4. Display first letter as capital in given sentence

```java
import java.util.Scanner;
class FirstCharUpper
{
        public static void main(String[] args)
        {
                Scanner sc=new Scanner(System.in);
                System.out.println("Enter your sentence:");
                String st=sc.nextLine();
                char ch[]=st.toCharArray();
                st="";
                for (int i=0;i<ch.length ;i++ )
                {
                        if (i==0 && ch[i]!=' ' || ch[i]!=' ' && ch[i-1]==' ')
                        {
                                if(ch[i]>='a' && ch[i]<='z')
                                        ch[i]=(char) (ch[i]-32);
                        }
                        else if (ch[i]>='A' && ch[i]<='Z')
                        {
                                ch[i]=(char) (ch[i]+32);
                        }
                        st=st+ch[i];
                }
                System.out.println(st);
        }
}
```

**OUTPUT:**

Enter your sentence:

this is good output

This Is Good Output

### 5. To print number of characters in each word in sentence

```java
import java.util.Scanner;
class CharInWordCount
{
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter your sentence:");
        String st=sc.nextLine();
        char ch[]=st.toCharArray();
        st="";
        for (int i=0;i<ch.length ;i++ )
        {
            int c=0;
            while (i<ch.length && ch[i]!=' ')
            {
                st=st+ch[i];
                i++;
                c++;
            }
            st=st+c;
            //System.out.println(st);
        }
        System.out.println(st);
    }
}
```

## OUTPUT:

Enter your sentence:

what is this>

what4is2this>5

## 6. To count how many uppercase, lowercase, digit, vowels, consonants, special symbol in given sentence

```java
import java.util.Scanner;
class CountCharNumbers
{
        public static void main(String[] args)
        {
                int uc=0,lc=0,dc=0,vc=0,cc=0,sc=0;
                Scanner s=new Scanner(System.in);
                System.out.println("Enter the String:");
                String st=s.nextLine();
                char ch[]=st.toCharArray();
                for(int i=0;i<ch.length;i++)
                {
                        if(ch[i]>='A' && ch[i]<='Z')
                        {
                                uc++;
                                if(ch[i]=='A' ||  ch[i]=='E' || ch[i]=='I' || ch[i]=='O' || ch[i]=='U')
                                        vc++;
                                else
                                        cc++;
                        }
                        else if(ch[i]>='a' && ch[i]<='z')
                        {
                                lc++;
                                if(ch[i]=='a' ||  ch[i]=='e' || ch[i]=='i' || ch[i]=='o' || ch[i]=='u')
                                        vc++;
                                else
                                        cc++;
                        }
                        else if(ch[i]>='0' && ch[i]<='9')
                                dc++;
                        else
                                sc++;
                }
                System.out.println("uppercase:"+uc);
                System.out.println("lowercase:"+lc);
                System.out.println("vowels:"+vc);
                System.out.println("consonants:"+cc);
                System.out.println("digits:"+dc);
                System.out.println("special characters:"+sc);
        }
}
```

## OUTPUT:

```
Enter the String:
we are counting 56789 EveryThing@#$
uppercase:2    lowercase:21  vowels:9
consonants:14 digits:5         special characters:7
```

### 7. Count of each character in the given sentence

```java
class CountCharacters
{
    public static void main(String[] args)
    {
        String st="we are reading occurrences of characters";
        char ch[]=st.toCharArray();
        int n=ch.length;
        for(int i=0;i<n;i++)
        {
            int count=1;
            for(int j=i+1;j<n;j++)
            {
                if(ch[i]==ch[j])
                {
                    count++;
                    int k=j;
                    while(k<n-1)
                    {
                        ch[k]=ch[k+1];
                        k++;
                    }
                    n--;
                    j--;
                }
            }
            System.out.println(ch[i]+" occurred "+count+" times");
        }
    }
}
```

**OUTPUT:**

w occurred 1 times
e occurred 5 times
 occurred 5 times
a occurred 5 times
r occurred 6 times d occurred 1 times i occurred 1 times  n occurred 2 times
g occurred 1 times
o occurred 2 times
c occurred 5 times
u occurred 1 times s occurred 2 times f occurred 1 times
h occurred 1 times
t occurred 1 times

## 8. Finding the Anagram

```java
import java.util.Scanner;
class Anagram
{
        public static void main(String[] args)
        {
                Scanner sc=new Scanner(System.in);
                System.out.println("Enter first sentence:");
                String st1=sc.nextLine();
                System.out.println("Enter second sentence:");
                String st2=sc.nextLine();
                Anagram a1=new Anagram();
                boolean res=a1.isAnagram(st1,st2);
                if (res)
                        System.out.println("Strings are anagram");
                else
                        System.out.println("Strings are not anagram");
        }
}
class Anagram
{
        boolean isAnagram(String s1,String s2)
        {
                s1=removeSpace(s1);
                s2=removeSpace(s2);
                if(s1.length()!=s2.length())
                        return false;
                s1=toLowerCase(s1);
                s2=toLowerCase(s2);
                boolean b=check(s1,s2);
                return b;
        }


        boolean check(String s1,String s2)
        {
                char ch1[]=s1.toCharArray();
                char ch2[]=s2.toCharArray();
                ch1=sort(ch1);
                ch2=sort(ch2);
                for (int i=0;i<ch1.length ;i++ )
                {
                        if(ch1[i]!=ch2[i])
                                return false;
                }
                return true;
        }
```

```
char[] sort(char ch[])
{
        for (int i=0;i<ch.length ;i++ )
        {
                for (int j=i+1;j<ch.length ;j++ )
                {
                        if(ch[i]>ch[j])
                        {
                                char temp=ch[i];
                                ch[i]=ch[j];
                                ch[j]=temp;
                        }
                }
        }
        return ch;
}


String removeSpace(String st)
{
        char ch[]=st.toCharArray();
        st="";
        for (int i=0;i<ch.length ;i++ )
        {
                if(ch[i]!=' ')
                        st=st+ch[i];
        }
        return st;
}


String toLowerCase(String st)
{
        char ch[]=st.toCharArray();
        for (int i=0;i<ch.length ;i++ )
        {
                if(ch[i]>=65 && ch[i]<=91)
                        ch[i]=(char) (ch[i]+32);
        }
        st=new String(ch);
        return st;
}
}
```

**OUTPUT:**
Enter first sentence:
keep peek
Enter second sentence:
PeeK Keep
Strings are anagram

## 9. Find the substring in the given sentence

```java
import java.util.Scanner;
class SubString
{
        static boolean check(String st1,String st2)
        {
                char[] c1=st1.toCharArray();
                char[] c2=st2.toCharArray();
                for(int i=0;i<c1.length;i++)
                {
                        int k=i;
                        //int i++;
                        int j=0;
                        while(k<c1.length && j<c2.length && c1[k]==c2[j])
                        //while(i<c1.length && j<c2.length && c1[i]==c2[j])
                        {
                                k++;
                                //i++;
                                j++;
                        }
                        if(j==c2.length && (i==0 || c1[i-1]==' ') && (k==c1.length || c1[k]==' '))
                                return true;
                        //i--;
                }
                return false;
        }
        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
                System.out.println("Enter the main string:");
                String ms=sc.nextLine();
                System.out.println("Enter the sub string:");
                String ss=sc.nextLine();
                boolean rs=check(ms,ss);
                if(rs)
                        System.out.println("yes");
                else
                        System.out.println("no");
        }
}
```

## OUTPUT:

Enter the main string:

we are the best of the best

Enter the sub string:

best

yes

10. **Finding how many times each sub string is present**

```java
import java.util.Scanner;
class SubStringRepeat
{
        static int countWord(String st1,String st2)
        {
                char[] c1=st1.toCharArray();
                char[] c2=st2.toCharArray();
                int count=0;
                for(int i=0;i<c1.length;i++)
                {
                        int in=-1;
                        int k=i;
                        int j=0;
                        while(k<c1.length && j<c2.length && c1[k]==c2[j])
                        //while(i<c1.length && j<c2.length && c1[i]==c2[j])
                        {
                                k++;
                                //i++;
                                j++;
                        }
                if(j==c2.length && (i==0 || c1[i-1]==' ') && (k==c1.length || c1[k]==' '))
                        {
                                count++;
                        }
                        //i--;
                }
                return count;
                //return in;
        }
        public static void main(String[] args)
        {
                Scanner sc = new Scanner(System.in);
                System.out.println("Enter the main string:");
                String ms=sc.nextLine();
                System.out.println("Enter the sub string:");
                String ss=sc.nextLine();
                int rs=countWord(ms,ss);
                if(rs>0)
                        System.out.println("yes found "+rs+" times");
                else
                        System.out.println("not found");
        }
}
```

**OUTPUT:**
Enter the main string:
we ere the bese in the best of all the best
Enter the sub string:
best
yes found 2 times