**Ex No 7 String Handling**

**Date:**

**Ex No 7**

**Aim:**

To write the java program using String handling and algorithm for the following

1. **Write a program called Bin2Dec to convert an input binary string into its equivalent   
   decimal number.**   
   **Sample Output:**  
   Enter a Binary string: 1011  
   The equivalent decimal number for binary "1011" is: 11  
   Enter a Binary string: 1234

error: invalid binary string "1234"

**Algorithm:**

1. Start
2. Import Scanner Class
3. Create a object for the Scanner Class to access
4. Get the input in string data type
5. Convert the string into character array using tochararray
6. Convert each character into number by dividing 48 of remainder
7. Check the condition the number is less than 0 or greater than 1 if its true then goto step
8. Calculate decimal value using (2^^len-1)\*s+cal
9. And goto step 6 until the length of the string
10. If flag==0 then
    1. Display the equivalent decimal value
11. Else
    1. Display the error
12. Stop

**Program:**

package oops;

import java.util.Scanner;

public class Bin2Dec

{

public static void main(String[] args) {

Scanner obj=new Scanner(System.in);

System.out.print("Enter the Binary String:");

String a=obj.next();

char z[ ]=a.toCharArray();

int len=a.length();

int cal=0,flag=0;

int m[ ] = new int[a.length()];

for(int i=0; i < a.length(); i++)

{

m[i]=(int)z[i]%48;

int s= m[i];

if(s>1)

{

flag=1;

break;

}

cal=(int)((Math.pow(2,len-1)\*s)+cal);

len--;

}

if(flag==0)

{

System.out.println("The equivalent decimal number for binary '"+a+"' is: "+cal);

}

else

{

System.out.println("Error: invalid binary string "+"'"+a+"'");

}

}

}

**Output:**

**Case 1:**

Enter the Binary String:1001

The equivalent decimal number for binary '1001' is: 9

**Case 2:**

Enter the Binary String:1234

Error: invalid binary string '1234'

1. **Write a Java Program to divide a string in n equal parts**

**Sample Output:**

The string string is :abcdefghijklmnopqrstuvwxy

The string is divided into 5 parts and they are abcde fghij klmno pqrst uvwxy

**Algorithm:**

1. Start
2. Import Scanner Class
3. Create a object for the Scanner Class to access
4. Get the string and no of parts to be divided
5. If string length is not divisible by no of parts
   1. Display It is not possible
6. Else
   1. Initialize i=0
   2. If i % no of parts ==0
      1. Newline
   3. Display the character
   4. Goto step 6.2 until i<string size
7. Stop

**Program:**

package oops;

import java.util.Scanner;

public class spilt {

public static void main(String[] args) {

// TODO code application logic here

Scanner obj=new Scanner(System.in);

System.out.print("Enter the String:");

String str1 =obj.next();

System.out.print("Enter the String divided part (int):");

int split\_number =obj.nextInt();

splitStrings s1=new splitStrings();

s1.splitString(str1, split\_number);

}

}

class splitStrings

{

void splitString(String str1, int n)

{

int str\_size = str1.length();

int part\_size;

if (str\_size % n != 0)

{

System.out.println("The size of the given string is not divisible by " + n);

}

else

{

System.out.println("The given string is: " + str1);

System.out.println("The string divided into " + n + " parts and they are: ");

part\_size = str\_size / n;

for (int i = 0; i < str\_size; i++)

{

if (i % part\_size == 0)

{

System.out.println();

}

System.out.print(str1.charAt(i));

}

}

}

}

**Output:**

Enter the String:vishnu

Enter the String divided part (int):3

The given string is: vishnu

The string divided into 3 parts and they are:

vi

sh

nu

|  |  |
| --- | --- |
| Observation (20) |  |
| Record(5) |  |
| Total(25) |  |
| Initial |  |

**Result:**

The Java Program for the given problem have been solved using Netbeans IDE 8.2.