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1 /*
2  * Problem Statement 1:
3  You are given a positive integer n. Write a Java function that
4  counts the number of digits in
5  the number. However, you are not allowed to convert the number to a
6  string, use any
7  mathematical formula or log function, or use any inbuilt functions.
8  The function should take
9  the integer n as input and return the number of digits in the
10 number.
11 Example output:
12 Input: 12345
13 Output: Number of digits: 5
14 */
15
16 public class Main {
17
18     public static void main(String[] args) {
19         // TODO Auto-generated method stub
20         int n=1234;
21         int count=0;
22         while(n>0) {
23             n=n/10;
24             count+=1;
25         }
26         System.out.println("Number of digits are:"+count);
27     }
28 }
29
30 /*
31  * Output:
32  * Number of digits are:4
33  */
```

```
1 /*
2 Problem Statement 2:
3 You are given a positive integer n. Write a Java function that
4 counts the number of even and
5 odd digits in the number. However, you are not allowed to convert
6 the number to a string,
7 use any mathematical formula or log function, or use any inbuilt
8 functions. The function
9 should take the integer n as input and return the number of even and
10 odd digits in the number.
11 Example output:
12 Input: 24689
13 Output: Number of even digits: 4, Number of odd digits: 1
14 */
15
16 public class Main {
17
18     public static void main(String[] args) {
19         // TODO Auto-generated method stub
20         int n=123466;
21         int evenCount=0;
22         int oddCount=0;
23         while(n>0) {
24             if((n%10)%2==0)
25                 evenCount+=1;
26             else
27                 oddCount+=1;
28             n=n/10;
29         }
30         System.out.println("Number of even digits :"+evenCount+",
31         Number of odd digits: "+oddCount);
32     }
33 }
34
35 /*
36 * Output:
37 * Number of even digits :4, Number of odd digits: 2
38 */
```

```
1 /*
2 Problem Statement 3:
3 You are given a positive integer n. Write a Java function that
4 counts the sum of digits in the
5 number. However, you are not allowed to convert the number to a
6 string, use any
7 mathematical formula or log function, or use any inbuilt functions.
8 The function should take
9 the integer n as input and return the sum of digits in the number.
10 Example output:
11 Input: 4567
12 Output: Sum of digits: 22
13 */
14
15 public class Main {
16
17     public static void main(String[] args) {
18         // TODO Auto-generated method stub
19         int n=123466;
20         System.out.println("Input: "+n);
21         int sum=0;
22         while(n>0) {
23             sum+=n%10;
24             n=n/10;
25         }
26         System.out.println("Output: Sum of digits "+sum);
27     }
28 }
29
30 /*
31 * Output:
32 * Input: 123466
33 * Output: Sum of digits 22
34 */
```

```
1 /*
2 Problem Statement 4:
3 You are given a string s containing alphanumeric characters and
  special characters. Write a
4 Java function that removes all the special characters from the
  string. The function should take
5 the string as input and return the modified string.
6 Example Input: "He#llo $Wo%rld!"
7 Example Output: "HelloWorld"
8 */
9
10 public class Main {
11
12     public static void main String[] args) {
13         // TODO Auto-generated method stub
14         String str="He#llo $Wo%rld!";
15         System.out.println("Input: "+str);
16         str=str.replaceAll("[^a-zA-Z0-9]", "");
17         System.out.println("Output: "+str);
18     }
19
20 }
21
22 /*
23  * Output:
24  * Input: He#llo $Wo%rld!
25  * Output: HelloWorld
26  */
```

```
1 /*
2 Problem Statement 5:
3 You are given a string s containing spaces between words. Write a
  Java function that removes
4 all the spaces from the string. The function should take the string
  as input and return the
5 modified string
6 Example Input: "The quick brown fox"
7 Example Output: "Thequickbrownfox"
8 */
9
10 public class Main {
11
12     public static void main String[] args) {
13         // TODO Auto-generated method stub
14         String str="The quick brown fox";
15         System.out.println("Input: "+str);
16         str=str.replaceAll("[ ]","");
17         System.out.println("Output: "+str);
18     }
19
20 }
21
22 /*
23  * Output:
24  * Input: The quick brown fox
25 Output: Thequickbrownfox
26 */
```