



Question 1.java



```
1 import java.io.*;
2 public class Main
3 {
4     public static void main(String[] args)throws IOException
5     {
6         BufferedReader br=new BufferedReader (new InputStreamReader(System.in));
7         System.out.println("Author:K.Lokesh\nSAP ID:51834512");
8         System.out.print("Enter a number : ");
9         int n = Integer.parseInt(br.readLine());
10        int copy = n, a = 0, sum = 0;
11        String b = Integer.toString(n);
12        int len = b.length();
13
14        while(copy>0)
15        {
16            a = copy % 10;
17            sum = (sum * 10 + a) * Math.pow(a, len);
18        }
19    }
20 }
```




Try Dcoder's keyboard



```
13
14     while(copy>0)
15     {
16         a = copy % 10;
17         sum = sum + (int)Math.pow(a,len);
18         len--;
19         copy = copy / 10;
20     }
21
22     if(sum == n)
23         System.out.println(n+" is a Disarium Number.");
24     else
25         System.out.println(n+" is not a Disarium Number.");
26 }
27 }
```



Try Dcoder's keyboard 



× Terminal



```
Author:K.Lokesh  
SAP ID:51834512  
Enter a number : 175  
175 is a Disarium Number.  
  
Process finished.
```



Question 2.java

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```
1 import java.util.Arrays;
2
3 public class Main
4 {
5     private static void sortBinaryArray(int[] inputArray)
6     {
7         int zeroCount = 0;
8
9         System.out.println("Author:K.Lokesh\nSAP ID:51834512");
10        System.out.println("Input Array Before Sorting : "+Arrays.toString(inputArray));
11
12        for (int n = 0; n < inputArray.length; n++)
13        {
14            if (inputArray[n] == 0)
15            {
16                zeroCount++;
17            }
18        }
19    }
20 }
```

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Question 2.java

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```
15     {
16         zeroCount++;
17     }
18 }
19
20 for (int n = 0; n < zeroCount; n++)
21 {
22     inputArray[n] = 0;
23 }
24
25 for (int n = zeroCount; n < inputArray.length; n++)
26 {
27     inputArray[n] = 1;
28 }
29
30 System.out.println("Input Array After Sorting : "+Arrays.toString(inputArray));
31
```

Make public





Question 2.java

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```
23 }
24
25 for (int n = zeroCount; n < inputArray.length; n++)
26 {
27     inputArray[n] = 1;
28 }
29
30 System.out.println("Input Array After Sorting : "+Arrays.toString(inputArray));
31 }
32
33 public static void main(String[] args)
34 {
35     sortBinaryArray(new int[] {1, 0, 1, 1, 0, 1, 0, 0});
36 }
37 }
```

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× Terminal



Author:K.Lokesh

SAP ID:51834512

Input Array Before Sorting : [1, 0, 1, 1, 0, 1, 0, 0]

Input Array After Sorting : [0, 0, 0, 0, 1, 1, 1, 1]

Process finished.



Question 3.java

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```
1 import java.util.*;
2 import java.lang.*;
3 // Java program to replace a digit
4 // with other in a given number.
5 class GFG
6 {
7     static int replaceDigit(int x, int d1,
8                             int d2)
9     {
10         int result = 0, multiply = 1;
11
12         while (x % 10 > 0)
13         {
14
15             // Take remainder of number
16             // starting from the unit
17             // e digit
18             remainder = x % 10;
19
20             // If remainder is equal to d1,
21             // then replace it with d2
22             if (remainder == d1)
23                 remainder = d2;
24
25             result = (result * 10) + remainder;
26             x = x / 10;
27         }
28         return result;
29     }
30 }
31
32 // Driver code
33 public static void main (String[] args)
34 {
35     int x = 12345, d1 = 4, d2 = 9;
36     int result = replaceDigit(x, d1, d2);
37     System.out.println("The modified number is: " + result);
38 }
```

Make public





Question 3.java

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```
15 // take remainder of number
16 // starting from the unit
17 // place digit
18 int remainder = x % 10;
19 // check whether it is equal
20 // to the digit to be replaced.
21 // if yes then replace
22 if (remainder == d1){
23     result = result + d2 * multiply;
24 }
25 else { // else remain as such
26     result = result + remainder * multiply;
27 }
28 // Update and move forward
29 // from unit place to
30 // hundred place and so on.
31 multiply *= 10;
32 // Make public static void main(String[] args) {
33     // 10; // update the value
```





Question 3.java

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```
35 }
36 // Driver code
37 public static void main(String[] args)
38 {
39     System.out.println("Author :K.Lokesh \nSap id : 51834512");
40     Scanner sc=new Scanner(System.in);
41     System.out.println("Enter a number:");
42     int x =sc.nextInt();
43     System.out.println("enter which no you replace:");
44     int d1 =sc.nextInt();
45     System.out.println("enter the number which number you want:");
46     int d2 =sc.nextInt();
47     System.out.println(replaceDigit( x, d1, d2));
48 }
49 }
```

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```
Author :K.Lokesh
Sap id : 51834512
Enter a number:
1347232
enter which no you replace:
2
enter the number which number you want:
6
1347636

Process finished.
```



Question 5.java

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```
1 public class Main
2 {
3     public static int binarySearch(int[] M, int left, int right, int n)
4     {
5         if (left > right) {
6             return -1;
7         }
8
9
10        int mid = (left + right) / 2;
11
12        if (n == M[mid]) {
13            return mid;
14        }
15
16        else if (n < M[mid]) {
17            return binarySearch(M, left, mid - 1, n);
18        }
19        else if (n > M[mid]) {
20            return binarySearch(M, mid + 1, right, n);
21        }
22    }
23 }
```



Question 5.java

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```
15
16     else if (n < M[mid]) {
17         return binarySearch(M, left, mid - 1, n);
18     }
19
20     else {
21         return binarySearch(M, mid + 1, right, n);
22     }
23 }
24
25 public static void main(String[] args)
26 {
27     int[] M = { 2, 5, 6, 8, 9, 10 };
28     int key = 5;
29
30     int left = 0;
31         = M.length - 1;
32     = binarySearch(M, left, right, key);
```

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Question 5.java

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```
28  int key = 5;
29
30  int left = 0;
31  int right = M.length - 1;
32
33  int index = binarySearch(M, left, right, key);
34
35  System.out.println("Author:K.Lokesh\nSAP ID: 51834512");
36  if (index != -1) {
37      System.out.println("Element found at index " + index);
38  } else {
39      System.out.println("Element not found in the array");
40  }
41  }
42 }
```

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```
Author:K.Lokesh  
SAP ID: 51834512  
Element found at index 1  
  
Process finished.
```