PLACEMENTS KEY'S

Coding Challenge #25 (Question)

Day - 13

Rahul is pursuing degree in the Computer Science stream. He is working on a project. The main aim of the project is to find whether the string is palindrome or not. Due to lack of time he is facing difficulty in project completion. So, help him in completion of the project.

Input format:

The first line contains string.

Output format:

If the string is palindrome print "string is palindrome" else print "string is not palindrome".

Constraints:

The input should be in string format.

Sample Input 0:

Key

Sample Output 0:

Key is not a Palindrome

Sample Input 1:

abccba

Sample Output 1:

abccba is a Palindrome

PLACEMENTS KEY'S

Coding Challenge #25 (C Solution)

Day - 13

```c
#include <stdio.h>
#include <string.h>
void isPalindrome(char str[])
{
  int l = 0;
  int h = strlen(str) - 1;
  while (h > l)
   {
          if (str[l++] != str[h--])
          {
            printf("%s is not a Palindrome", str);
          }
   }
  printf("%s is a Palindrome", str);
}
int main()
{
        char string[20];
        printf("Enter the string:",string);
        scanf("%s",&string);
        isPalindrome(string);
         return 0;
}
```

PLACEMENTS KEY'S

Coding Challenge #25 (JAVA Solution)

Day - 13

```
import java.util.*;
public class Main
{
  public static void main(String[] args)
        {
          StringBuilder sb = new StringBuilder();
          Scanner sc= new Scanner(System.in);
          System.out.print("Enter a string: ");
         sb.append(sc.nextLine());
          System.out.println("String is:" + sb);
      if(sb.toString().equals(getReverse(sb)))
            {
                System.out.println("This is a palindrome");
             }
          else
            {
              System.out.println("This is not a palindrome");
            }
   }
  public static String getReverse(StringBuilder str)
   {
       return str.reverse().toString();
   }
}
```

PLACEMENTS KEY'S

Coding Challenge #26 (Question)

Day - 13

Filter the given array and find the sum of the elements in the last array.

We get user input on the length of the array and its elements. Print the filtered arrays and sum of the elements in the last array by following the test cases.

Input Format:

Get user input regarding the length(n) of the array.
Get user input on the elements of the array.

Constraints:

1 ≤ n ≤1000, where n is a multiple of 2.
Array elements take any integer values.

Sample Input 0:

```
6
1 4 5 3 6 2
```

Sample Output 0:

```
4 3 2
4 2
6
```

PLACEMENTS KEY'S

Coding Challenge #26 (Question Contd.)

Day - 13

Sample Input 1:

10

1 2 3 4 5 6 7 8 9 10

Sample Output 1:

2 4 6 8 10
2 6 10
18

Sample Input 2:

12
11 2 36 65 98 45 75 62 12 53 45 15

Sample Output 2:

2 65 45 62 53 15
2 45 53
100

Sample Input 3:

4
1 2 4 5

Sample Output 3:

2 5
2
2

PLACEMENTS KEY'S

Coding Challenge #26 (C Solution)

Day - 13

```c
#include <stdio.h>
int main()
{
   int array1[10],array2[10],array3[10];
   int iterator,sum=0,j=1,k=1;
   int len=0;
   int n,z=0;
   scanf("%d",&n);
   for (iterator=0;iterator<n;iterator++)
   {
      scanf("%d",&array1[iterator]);
      len++;
   }
   for(iterator=0;iterator<len;iterator++)
   {
      if((iterator%2)==1)
      {
         printf("%d ",array1[iterator]);
         array2[j]=array1[iterator];
         j+=1;
      }
   }
   printf("\n");
   for(iterator=0;iterator<=j-1;iterator++)
      {
         if((iterator%2)==1)
         {
            printf("%d ",array2[iterator]);
            sum=sum+array2[iterator];
            k+=1;
         }
      }
   printf("\n");
   printf("%d\n",sum);          //gets array sum
   return 0;
}
```

PLACEMENTS KEY'S

Coding Challenge #26 (JAVA Solution)

Day - 13

```
import java.util.*;
public class Main{
   public static void main(String[] args) {
      Scanner sc= new Scanner(System.in);
      System.out.print("Enter the size of the array: ");
      int size = sc.nextInt();
      System.out.println("Size of the array: "+ size);
      int[] arrayNumbers = new int[size];
      for(int i=0;i<size;i++){
         System.out.println("Enter number at a["+i+"]");
         arrayNumbers[i] = sc.nextInt();
      }
      int[] tempArray = null;
      int tempSize;
      System.out.println("size is"+size);
      while(size>3){
         System.out.println("Inside while");
         tempSize = ((size/2) == 0) ? size/2 : (size+1)/2;
         tempArray = new int[tempSize];
         System.out.println("size of second array is" + tempSize);
         System.out.println("size of main array is" + size);
         int k = (size%2) >0 ? (size %2) - 1 : (size %2) +1;
         int j = 0;
```

PLACEMENTS KEY'S

Coding Challenge #26 (JAVA Solution Contd.)

Day - 13

```
while(k<size && j<=k){
            System.out.println("Setting value " + arrayNumbers[k] +"to tempArray["
+j+"]");
            tempArray[j] = arrayNumbers[k];
            k+=2;
            j++;

          }
          size = tempSize;
          arrayNumbers = tempArray;

       }
       int sum = 0;
       for( int num : (tempArray != null) ? tempArray : arrayNumbers) {
          sum = sum+num;

       }
       System.out.println("sum is" + sum);

    }

}
```