TASK 1

Q1.

```
#include <stdio.h>
int main()
{
int number, LD;
printf(" Enter a number"4589);
scanf("%d", &number);
LD = number / 10;
printf(" \n The Last Digit of a Given Number %d = %d", number, LD);
return 0;
}
```

Answer: remove 4589 from the printf statement

Q2.

```
int sumcal(int len, int* arr, int value)
{
int sum = 0;
for(int i =0 ; i< len-1; i++ )
{
if(arr[i]%value == 0)
sum =+ arr[i];
}
return sum;
}
```

No error. They have written just the function.

Here is the complete program

```
int sumcal(int len, int* arr, int value)
{
int sum = 0;
for(int i =0 ; i< len-1; i++ )
{
if(arr[i]%value == 0)
sum =+ arr[i];
}
return sum;
}
int main()
{
int arr1[5]={5,10,15,20,25};
printf("sum = %d", sumcal(5,arr1,10));

}
```

Q3

```
#include <stdio.h>
int main()
{
for(int i=1;i <= 4;i--)
{
for(int j=1;j <= 4; j++)
{
if(i != j)
{
printf("*");
}
else
{
```

```
printf(" ");
}
}
printf("\n");
}
return 0;
}
```

Ans: leads to infinite loop

Q4.

```
#include <stdio.h>
void main() {
char a='A';
(a>10)?printf("Yes");:printf("No");
return 0;
}
```

Ans: only one : required. Semicolon is extra

Q5

```
#include <iostream>
using namespace std;
int main() {
int o; i; s;
for(o=5; o>=1; o--)
{
for(s=1 s<=5-o s++)
cout<<" ";
for (i=1 i<=o i++){
cout>>"*";}
```

```
cout<<endl;
}}}
```

Errors in the yellow highlighted lines

Correct code:

```
#include <iostream>
using namespace std;
int main() {
int o, i, s;
for(o=5; o>=1; o--)
{
for(s=1;s<=5-o; s++)
cout<<" ";
for (i=1;i<=o; i++){
cout<<"*";}
cout<<endl;
}}
```

Q6.

```
z=int(“Enter a number:”)
for in range [0,9]:
        if z=x:
                print(“They are equal”);
        else:
                print(“They are not equal”)
```

correct code:

```
z=input("Enter a number:")
for z in range (0,9):
   if z==x:
      print("They are equal");
```

```
    else:
        print("They are not equal")
```

Q7.

```
#include <iostream>
class test{
int my_variable;
} // missing semicolon
int main() {
test code_chef;
cin>>code_chef.my_variable;
if(code_chef.my_variable%2==0){
cout<<"Even";
}
else{
cout<<odd; // missing “”. It should be “odd”
}
return 0;
}
```

Correct code:

```
#include <iostream>
using namespace std;
class test{
    public:
int my_variable;
};
int main() {
```

```
test code_chef;
cin>>code_chef.my_variable;
if(code_chef.my_variable%2==0){
cout<<"Even";
}
else{
cout<<"odd";
}
return 0;
}
```

Q8.

```
#include<iostream>
using namespace std // missing semicolon
void printSums(int N)
{
int start=1, end=(N+1)/2;
while (start<end)
{
int sum=0;
for (int i=start;i<=end;i++)
{
sum=+i;
if (sum == N)
{
for (j=start,j<=I,j++) // j, I not declared. Comma to be replaced with semicolon
cout<<j<<" ";
cout<<"/n";
break;
}
if (sum>N)
```

```
break // missing semicolon
}
sum=0;
start++;
}
}
int main()
{
int n;
cin>>n;
printsums(n); // name of the function is printSums(n)
return 0;
}
```

Note: pointed out the syntactical error

Correct code:

```
#include<iostream>
using namespace std;
void printSums(int N)
{
int start=1, end=(N+1)/2, j, I;
while (start<end)
{
int sum=0;
for (int i=start;i<=end;i++)
{
sum=+i;
if (sum == N)
{
for (j=start;j<=I;j++)
cout<<j<<" ";
cout<<"/n";
```

```
break;
}
if (sum>N)
break;
}
sum=0;
start++;
}
}
int main()
{
int n;
cin>>n;
printSums(n);
return 0;
}
```

Q9

```
#include <iostream>
using namespace std;
int main() {
int length //missing semicolon
cout<<enter the length of the array"<<endl; // missing opening quote
cin>>length;
int array(length]; //square parenthesis
for(int i=0;i<length;i++){
cin>>array[i];
}
int min=array[0];max=array[0]; // semicolon to be replaced with comma
for(int i=1;i<length;i++){
```

```
if(array[i]>max)
max = array[i];
else if(array[i]<<min) // it should be less than operator.
min = array[i];
}
cout<< min<<" "<<max;
return std;
}
```

Correct code:

```
#include <iostream>
using namespace std;
int main() {
int length;
cout<<"enter the length of the array"<<endl;
cin>>length;
int array[length];
for(int i=0;i<length;i++){
cin>>array[i];
}
int min=array[0],max=array[0];
for(int i=1;i<length;i++){
if(array[i]>max)
max = array[i];
else if(array[i]<min)
min = array[i];
}
cout<<"display\n";
cout<< min<<" "<<max;
return 0;
```

}

Q10.

```
#include <stdio.h>
*include <string.h> // it should be #include <string.h>
main() // it should be int or void main()
{
int t,i,diff_count;
scanf("%d";&t) // comma instead of semicolon. Also missing semicolon at end
char s[100001], // semicolon instead of comma
while(t+-){ // it should be while(t--){
diff_count=0;
scanf("%s",s);
for(int i=0;i<strlen(s)-1;i++){
if(s[i]===s[i+1]) // drop one “=” to. It should be ==
diff_count++;
}
printf("%d\n",diff_count);
return 0;
}
} //was missing
```

Correct code:

```
#include <stdio.h>
#include <string.h>
int main()
{
int t,i,diff_count;
scanf("%d",&t);
```

```
char s[100001];
while(t--){
diff_count=0;
printf("enter a charatcter\n");
scanf("%s",s);
for(int i=0;i<strlen(s)-1;i++){
if(s[i]==s[i+1])
diff_count++;
}
printf("%d\n",diff_count);
return 0;
}
}
```

TASK 2

Q2.

```
#include <stdio.h>
 void swap(int *xp, int *yp)
{
    int temp = *xp;
    *xp = *yp;
    *yp = temp;
}

// A function to implement bubble sort
void bubbleSort(int arr[], int n)
{
   int i, j;
   for (i = 0; i < n-1; i++)

      // Last i elements are already in place
      for (j = 0; j < n-i-1; j++)
         if (arr[j] > arr[j+1])
            swap(&arr[j], &arr[j+1]);
}

/* Function to print an array */
void printArray(int arr[], int size)
{
    int i;
    for (i=0; i < size; i++)
```

```
        printf("%d ", arr[i]);
    printf("\n");
}

// Driver program to test above functions
int main()
{
    int arr[10];
    int n, i, k, c=0;
    printf("enter size of the array\n");
    scanf("%d",&n);
    printf("enter %d values in array\n",n);
    for(i=0; i<n;i++){
        scanf("%d", &arr[i]);
    }
    bubbleSort(arr, n);
    printf("Sorted array: \n");
    printArray(arr, n);
    printf("which kth smallest number to find\n");
    scanf("%d",&k);
    printf("%dth smallest number is %d\n",k,arr[k-1]);
    // to check if it k number is prime or not
    for (i = 1; i <= arr[k-1]; i++) {
      if (arr[k-1] % i == 0) {
         c++;
      }
  }
  if (c == 2) {
  printf("%d number is a Prime number", k);
  }
  else {
```

```
  printf("%d number is not a Prime number",k);
  }
    return 0;
}
```

Q3.

```
#include <stdio.h>
#include <string.h>
 int main()
 {
    char c;
     for(c='A'; c<='Z'; c+=2)
     {
         printf("%c\n",c);
         c+=2;
         if((c>'y') || (c>'Y'))
         break;
         else
         printf("%c\n", tolower(c));
     }
     return 0;
 }
```

Q1

```
 #include <stdio.h>
#include <string.h>

void swap(char *xp, char *yp)
{

   char temp[100];
   strcpy(temp,xp);
   strcpy(xp,yp);
   strcpy(yp,temp);
}

// A function to implement bubble sort
void bubbleSort(char chararr[10][100], int n)
{
  int i, j, size1, size2;

  for (i = 0; i < n-1; i++)
  {
     for (j = 0; j < n-i-1; j++)
     {
        size1=strlen(chararr[j]);
        size2=strlen(chararr[j+1]);
        //printf("size1=%d size2 = %d\n", size1,size2);
        if(size1 >=4 && size2 >=4)
        {
          if (chararr[j][3] > chararr[j+1][3]){
          swap(chararr[j], chararr[j+1]);}
        }
        else
```

```
        {
            if(size1 <4 && size2 <4)
            {
              if (chararr[j][size1-1] > chararr[j+1][size2-1])
              swap(chararr[j], chararr[j+1]);
            }
            else
            {
              if(size1 <4)
              {
                printf("size 1 is less than 4\n");
               if (chararr[j][size1-1] > chararr[j+1][3])
                swap(chararr[j], chararr[j+1]);
               }
              else
               if (chararr[j][3] > chararr[j+1][size2-1])
               swap(chararr[j], chararr[j+1]);
            }
        }
      }


  }
}


/* Function to print an array */
void printArray(char ptrarr[10][100], int size)
{

   int i;
```

```
    for (i=0; i < size; i++)
       {
        printf("%s ", ptrarr[i]);
    printf("\n");
       }
}

int main()
{
    const char chararr[10][100];
    int i,n;
    printf("enter no. of elements\n");
    scanf("%d",&n);
    printf("enter %d values in array\n",n);
    for(i=0; i<n;i++){
       scanf("%s[^\n]",chararr[i]);
       if (strlen(chararr[i])<2)
       {
       printf("enter again\n");
       i--;
       }
    }
   bubbleSort(chararr, n);
    printf("Sorted array: \n");
    printArray(chararr, n);
    return 0;
}
```

Q4)

```
#include<stdio.h>
#include<math.h>
int digit(int);
int square(int);
int main(){
int n,digi,nsq,div,n1,n2;
scanf("%d",&n);
digi=digit(n);
nsq=square(n);
div=(int)(pow(10, digi) + 0.5);
n1=nsq%div;
n2=(nsq-n1)/div;
if((n1+n2)==n){
   printf("Chef Number");
   }
else {
   printf("Not Chef Number");
   }
return 0;
}
int digit(int num){
   int count = 0;
   while (num != 0){
         num = num / 10;
      ++count;
   }
   return (count);
   }
int square(int num){
```

```
return (num*num);
}
```