

<https://www.hackerearth.com/bz-klu-y21-cse-hons-phase-1-practice>

1. STUDENT GRADES (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int num;
    scanf("%d", &num);
    if(num>=90)
    {
        printf("GRADE-A");
    }
    else if(num>=80 && num<=89)
    {
        printf("GRADE-B");
    }
    else if(num>=60 && num<=79)
    {
        printf("GRADE-C");
    }
    else if(num>=40 && num<=59)
    {
        printf("GRADE-D");
    }
    else
    {
        printf("GRADE-E");
    }
}
```

2. FACTORIAL QUERIES (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>
long long int fact(int n);
int main(){
    long long int num;
    scanf("%lld", &num);
    long long int a[num];
    for(int i=0;i<num;i++)
    {
        scanf("%lld",&a[i]);
        long long int ans=fact(a[i]);
        printf("%lld ",ans);
    }
}
long long int fact(int n)
{
    long long int f=1;
    for(int i=1;i<=n;i++)
    {
        f*=i;
    }
    return f;
}
```

3. LOVE LETTER

4. FIBONACCI SERIES WITH RECURSION (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>
void fib(int n);
int main(){
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
        fib(a[i]);
    }
}
void fib(int n)
{
    if(n==1)
    {
        printf("0\n");
    }
    else if(n==2)
    {
        printf("0 1\n");
    }
    else
    {
        printf("0 1 ");
        int a=0,b=1;
        for(int i=2;i<n;i++)
        {
            int c=a+b;
            a=b;
            b=c;
            printf("%d ",c);
        }
        printf("\n");
    }
}
```

5. HEX DIGIT FOR DECIMAL (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int n;
    scanf("%d",&n);
    printf("%X",n);
}
```

6. FLEXIBLE INTRODUCTION (JAVA8)

Source Code [Plaintext Link](#)

```
import java.util.*;

class TestClass {
    public static void main(String args[] ) throws Exception {
        Scanner sc = new Scanner(System.in);
        int n=sc.nextInt();
        float f=sc.nextFloat();
        char c=sc.next().charAt(0);
        String str;
        if(c=='U')
        {
            str="UNMARRIED";
        }
        else{
            str="MARRIED";
        }
        System.out.println("Person is "+n+" years old, "+f+"ft tall and is "+str+".");
        sc.close();
    }
}
```

7. RANK OF ALPHABET (JAVA8)

Source Code [Plaintext Link](#)

```
import java.util.*;

class TestClass {
    public static void main(String args[] ) throws Exception {
        Scanner sc = new Scanner(System.in);
        char c = sc.next().charAt(0);
        int ans = c;
        System.out.println((ans-64));
        sc.close();
    }
}
```

8. PRIME CLASSIFIER (JAVA8)

Source Code [Plaintext Link](#)

```
import java.util.*;

class TestClass {
    public static void main(String args[] ) throws Exception {
        Scanner sc = new Scanner(System.in);
        int t;
        t=sc.nextInt();
        int tc=1;
        while(t>0)
        {
            int n;
            n=sc.nextInt();
            if(isPrime(n))
            {
                System.out.println("Test Case #"+tc+": PRIME");
            }
            else
            {
                System.out.println("Test Case #"+tc+": NOT-PRIME");
            }
            tc++;
            t--;
        }
    }
    public static boolean isPrime(int n)
    {
        if(n==1)
        {
            return false;
        }
        if(n==2)
        {
            return true;
        }
        if(n%2==0)
        {
            return false;
        }
        for(int i=3;i<=Math.sqrt(n);i+=2)
        {
            if((n%i)==0)
            {
                return false;
            }
        }
        return true;
    }
}
```

9. SUM OF DIGITS (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int t;
    scanf("%d",&t);
    while(t-->0)
    {
        int n;
        scanf("%d", &n);
        int a,r,sum=0;
        a=n;
        while(a>0)
        {
            r=a%10;
            sum+=r;
            a=a/10;
        }
        printf("%d ",sum);
    }
}
```

10. FORM NUMBER FROM DIGITS (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>
#include<math.h>
int main(){
    int a[3];
    for(int i=0;i<3;i++)
    {
        scanf("%d",&a[i]);
    }
    double ans=0;
    int j=2;
    for(int i=0;i<3 && j>=0;i++,j--)
    {
        ans+=(a[j]*pow(10,(double)i));
    }
    printf("%d", (int)ans);
}
```

11. PRINT DAYS OF WEEK (JAVA8)

Source Code [Plaintext Link](#)

```
class TestClass {  
    public static void main(String args[] ) throws Exception {  
        System.out.print("Monday\nTuesday\nWednesday\nThursday\nFriday\nSaturday\nSunday");  
    }  
}
```

12. QUOTIENT AND REMAINDER (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>  
  
int main(){  
    int x,y;  
    scanf("%d %d",&x,&y);  
    printf("%d %d", (x/y), (x%y));  
}
```

13. MINIMUM OF THREE NUMBERS (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>  
  
int main(){  
    int a[3];  
    for(int i=0;i<3;i++)  
    {  
        scanf("%d",&a[i]);  
    }  
    int min=a[0];  
    for(int i=1;i<3;i++)  
    {  
        if(a[i]<min)  
        {  
            min=a[i];  
        }  
    }  
    printf("%d",min);  
}
```

14. DIVISION RESULT (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    double x,y;
    scanf("%lf %lf",&x,&y);
    double ans=x/y;
    printf("%.2lf",ans);
}
```

15.SERIES STARTING 1, THEN 4 AND SUBSEQUENT EVEN NUMBERS (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int t;
    scanf("%d",&t);
    while(t-->0)
    {
        int n;
        scanf("%d",&n);
        if(n==1)
        {
            printf("1");
        }
        else if(n==2)
        {
            printf("1 4");
        }
        else
        {
            printf("1 4 ");
            int a=4;
            for(int i=2;i<n;i++)
            {
                printf("%d ",a+=2);
            }
        }
        printf("\n");
    }
}
```


16. NUMBER RELATION (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int a,b;
    scanf("%d %d",&a,&b);
    if(a<b)
    {
        printf("LESSER");
    }
    else if(a==b)
    {
        printf("EQUAL");
    }
    else
    {
        printf("GREATER");
    }
}
```

17. GET AND PRINT STUDENT DETAILS (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int n;
    char c;
    double d;
    scanf("%d %c %lf",&n,&c,&d);
    printf("%d %c %.2lf",n,c,d);
}
```

18. CASE CONVERSION (JAVA8)

Source Code [Plaintext Link](#)

```
import java.util.*;

class TestClass {
    public static void main(String args[] ) throws Exception {
        Scanner sc = new Scanner(System.in);
        char c = sc.next().charAt(0);
        if(c>=65 && c<=90)
        {
            c+=32;
        }
        else if(c>=97 && c<=122)
        {
            c-=32;
        }
        System.out.printf("%c",c);
    }
}
```

19. TWISTED VOWEL OR CONSONANT (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    char c;
    scanf("%c",&c);
    if(c=='a' || c=='e' || c=='i' || c=='o' || c=='u' || c=='A' || c=='E' || c=='I' || c=='O' ||
c=='U' || c=='y' || c=='Y')
    {
        printf("VOWEL");
    }
    else
    {
        printf("CONSONANT");
    }
}
```

20. CHAIR NUMBER TO ALPHABET (JAVA8)

Source Code [Plaintext Link](#)

```
import java.util.*;

class TestClass {
    public static void main(String args[] ) throws Exception {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        System.out.printf("%c",n+65);
    }
}
```

21. ULTA PULTA (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int x,y;
    scanf("%d %d",&x,&y);
    printf("%d%d\n",y,x);
    printf("%d%d",x,y);
}
```

22. ASCII VALUE (JAVA8)

Source Code [Plaintext Link](#)

```
import java.util.*;

class TestClass {
    public static void main(String args[] ) throws Exception {
        Scanner sc = new Scanner(System.in);
        char c = sc.next().charAt(0);
        int a=c;
        System.out.printf("%d\t%c",a,c);
    }
}
```

23. LAST THREE DIGITS (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int n;
    scanf("%d",&n);
    printf("%d",n%1000);
}
```

24. TAKE PLEDGE (JAVA8)

Source Code [Plaintext Link](#)

```
class TestClass {
    public static void main(String args[] ) throws Exception {
        System.out.println("I pledge to 'work hard' and become "+ "\"proficient\""+ " in programming.");
    }
}
```

25. DAILY TEMPERATURES (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>
#include<math.h>
int main(){
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    for(int i=0;i<n;i++)
    {
        int ans=0,x=0;
        for(int j=i+1;j<n;j++)
        {
            if(a[i]<a[j])
            {
                ans=abs(j-i);
                x++;
                break;
            }
        }
        if(x==0)
        {
            ans=0;
        }
        printf("%d ",ans);
    }
}
```

26. CRAZY ABOUT ZERO! (JAVA8)

Source Code [Plaintext Link](#)

```
import java.util.*;
class TestClass {
    public static void main(String args[] ) throws Exception {
        Scanner sc = new Scanner(System.in);
        String str=sc.next();
        int n=str.length();
        char c[]=str.toCharArray();
        int ct=0;
        for(int i=0;i<n/4;i++)
        {
            if(c[4*i]!='Z')
            {
                ct++;
            }
            if(c[(4*i)+1]!='E')
            {
                ct++;
            }
            if(c[(4*i)+2]!='R')
            {
                ct++;
            }
            if(c[(4*i)+3]!='O')
            {
                ct++;
            }
        }
        System.out.println(ct);
    }
}
```

27. FIND INDEX WITH $A[i]=i$ USING BINARY SEARCH (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>
int check(int a[],int n);
int main(){
    int t;
    scanf("%d",&t);
    while(t--){
        int n;
        scanf("%d",&n);
        int a[n];
        for(int i=0;i<n;i++){
            scanf("%d",&a[i]);
        }
        printf("%d ",check(a,n));
    }
}
int check(int a[],int n)
{
    for(int i=0;i<n;i++){
        if(a[i]==i)
        {
            return i;
        }
    }
    return -1;
}
```

28. REMOVE DUPLICATES FROM AN INTEGER ARRAY (JAVA8)

Source Code [Plaintext Link](#)

```
import java.util.*;

class TestClass {
    public static void main(String args[] ) throws Exception {
        Scanner sc = new Scanner(System.in);
        int n;
        n=sc.nextInt();
        int a[]=new int[n];
        for(int i=0;i<n;i++)
        {
            a[i]=sc.nextInt();
        }
        n = remove(a,n);
        for(int i=0;i<n;i++)
        {
            System.out.print(a[i]+" ");
        }
        sc.close();
    }
    public static int remove(int a[],int n)
    {
        if(n==0 || n==1)
        {
            return n;
        }
        int b[] = new int[n];
        int i=0;
        for(int j=0;j<n-1;j++)
        {
            if(a[j]!=a[j+1])
            {
                b[i++]=a[j];
            }
        }
        b[i++]=a[n-1];
        for(int j=0;j<i;j++)
        {
            a[j]=b[j];
        }
        return i;
    }
}
```

29. INVERT CASE AT GIVEN POSITIONS FROM THE END OF STRING (JAVA8)

Source Code [Plaintext Link](#)

```
import java.util.*;

class TestClass {
    public static void main(String args[] ) throws Exception {
        Scanner sc = new Scanner(System.in);
        String str=sc.next();
        String rev=new StringBuffer(str).reverse().toString();
        char c[]=rev.toCharArray();
        int n1,n2;
        n1=sc.nextInt();
        n2=sc.nextInt();
        for(int i=0;i<str.length();i++)
        {
            if(i==n1)
            {
                if(c[i]>=65 && c[i]<=90)
                {
                    c[i]+=32;
                }
                else
                {
                    c[i]-=32;
                }
            }
            if(i==n2)
            {
                if(c[i]>=65 && c[i]<=90)
                {
                    c[i]+=32;
                }
                else
                {
                    c[i]-=32;
                }
            }
        }
        String res=String.valueOf(c);
        String res_rev=new StringBuffer(res).reverse().toString();
        System.out.println(res_rev);
    }
}
```


30. LAST 3 DIGITS OF A VERY LONG NUMBER

PARTIALLY SOLVED

31. CRAZY LANGUAGE

NOT SOLVED

32. SWAP ME (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    for(int i=0;i<n-1;i+=2)
    {
        int temp=a[i];
        a[i]=a[i+1];
        a[i+1]=temp;
    }
    for(int i=0;i<n;i++)
    {
        printf("%d ",a[i]);
    }
}
```

33. FIND WHETHER INTEGERS IN THE ARRAY FORM A PALINDROME OR NOT (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int n;
    scanf("%d", &n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    int flag=1;
    for(int i=0;i<n/2;i++)
    {
        if(a[i]!=a[n-i-1])
        {
            flag=0;
            break;
        }
    }
    if(flag==1)
    {
        printf("True");
    }
    else
    {
        printf("False");
    }
}
```

34. SUM OF DIGITS OF A VERY LONG NUMBER

NOT SOLVED

35. FIX THE INDEX OF AN ELEMENT (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>
int index(int a[],int n,int x);

int main(){
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    int x;
    scanf("%d",&x);
    int ans=index(a,n,x);
    if(ans==-1)
    {
        printf("Element Not Found.");
    }
    else {
        printf("%d",ans);
    }
}

int index(int a[],int n,int x)
{
    for(int i=0;i<n;i++)
    {
        if(a[i]==x)
        {
            return i;
        }
    }
    return -1;
}
```

36. LARGEST NUMBER AT LEAST TWICE OF OTHERS (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>
int findLargest(int a[],int n);
int main(){
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    int ans = findLargest(a,n);
    printf("%d",ans);
}
int findLargest(int a[],int n)
{
    int max=0;
    for(int i=0;i<n;i++)
    {
        if(a[max]<a[i])
        {
            max=i;
        }
    }
    for(int i=0;i<n;i++)
    {
        if(max!=i && a[max]<(a[i]*2))
        {
            return -1;
        }
    }
    return max;
}
```

37. SPECIAL SUM (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>
int main()
{
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++)
    {
        scanf("%d",&a[i]);
    }
    int m,sum=0;
    scanf("%d",&m);
    for(int i=0;i<n;i++)
    {
        if(a[i]%m==0)
        {
            sum+=a[i];
        }
    }
    printf("%d",sum);
}
```

38. COUNT WORDS IN GIVEN STRING

NOT DONE

39. REVERSE A STRING

PARTIALLY SOLVED

40. PRINT RIGHT TRIANGLE WITH STARS (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int n;
    scanf("%d",&n);
    for(int i=0;i<n;i++)
    {
        for(int j=0;j<=i;j++)
        {
            printf("* ");
        }
        printf("\n");
    }
}
```

41. PRINT STAR RECTANGLE (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int r,c;
    scanf("%d %d",&r,&c);
    for(int i=0;i<r;i++)
    {
        for(int j=0;j<c;j++)
        {
            printf("* ");
        }
        printf("\n");
    }
}
```

42. PRINT ROW NUMBER RECTANGLE (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int r,c;
    scanf("%d %d",&r,&c);
    for(int i=1;i<=r;i++)
    {
        for(int j=0;j<c;j++)
        {
            printf("%d ",i);
        }
        printf("\n");
    }
}
```

43. PRINT COLUMN NUMBER RECTANGLE (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int r,c;
    scanf("%d %d",&r,&c);
    for(int i=0;i<r;i++)
    {
        for(int j=1;j<=c;j++)
        {
            printf("%d ",j);
        }
        printf("\n");
    }
}
```

44. PRINT STAR SQUARE (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int n;
    scanf("%d",&n);
    for(int i=0;i<n;i++)
    {
        for(int j=0;j<n;j++)
        {
            printf("* ");
        }
        printf("\n");
    }
}
```

45.PRINT EVEN NUMBER SEQUENCE WITH ALTERING SIGN IN N ROWS
NOT DONE

46. PRINT N ROWS, ROW INDEX REPEATED ROW INDEX TIMES (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int t;
    scanf("%d",&t);
    while(t-->0)
    {
        int n;
        scanf("%d",&n);
        for(int i=1;i<=n;i++)
        {
            for(int j=1;j<=i;j++)
            {
                printf("%d ",i);
            }
            printf("\n");
        }
        printf("\n\n");
    }
}
```

47. PRINT SQUARE SERIES IN N ROWS (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>
#include<math.h>
int main(){
    int t;
    scanf("%d",&t);
    while(t-->0)
    {
        int n;
        scanf("%d",&n);
        int k=1;
        for(int i=1;i<=n;i++)
        {
            for(int j=1;j<=i;j++)
            {
                printf("%d ",(int)pow(k, 2));
                k++;
            }
            printf("\n");
        }
        printf("\n\n");
    }
}
```

48. PRINT INCREASING NUMBER SEQUENCE IN N ROWS (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int t;
    scanf("%d",&t);
    while(t-->0)
    {
        int n;
        scanf("%d",&n);
        for(int i=1;i<=n;i++)
        {
            for(int j=1;j<=i;j++)
            {
                printf("%d ",j);
            }
            printf("\n");
        }
        printf("\n\n");
    }
}
```

49. PRINT N ROWS OF A STAR ISOSCELES TRIANGLE (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int t;
    scanf("%d",&t);
    while(t-->0)
    {
        int n;
        scanf("%d",&n);
        int k=1;
        for(int i=0;i<=n;i++)
        {
            for(int j=0;j<n-i;j++)
            {
                printf(" ");
            }
            for(k=0;k<2*i-1;k++)
            {
                printf("* ");
            }
            printf("\n");
        }
        printf("\n\n");
    }
}
```


50. IDENTITY MATRIX CHECK (C)

Source Code [Plaintext Link](#)

```
#include <stdio.h>

int main(){
    int n;
    scanf("%d",&n);
    int a[n][n];
    for(int i=0;i<n;i++)
    {
        for(int j=0;j<n;j++)
        {
            scanf("%d",&a[i][j]);
        }
    }
    int flag=1;
    for(int i=0;i<n;i++)
    {
        for(int j=0;j<n;j++)
        {
            if(i==j && a[i][j]!=1)
            {
                flag=0;
                break;
            }
            if(i!=j && a[i][j]!=0)
            {
                flag=0;
                break;
            }
        }
    }
    if(flag==0)
    {
        printf("NOT IDENTITY");
    }
    else
    {
        printf("IDENTITY");
    }
}
```

51 TO 58 NOT YET DONE