PLACEMENTS KEY'S

Coding Challenge #9 (Question)

Day - 5

Write a program in C to check whether a number is a Happy one or not.

A number is said to be happy if it yields 1 when replaced by the sum of squares of its digits repeatedly. If this process results in an endless cycle of numbers more than 3, then the number will be an unhappy number.

Sample input 0:

32

Sample output 0:

Happy number

Explanation:

Number = 32,

$3^2 + 2^2 = 13$,

$1^2 + 3^2 = 10$,

$1^2 + 0^2 = 1$

Sample input 1:

19

Sample output 1:

Unhappy number

Explanation:

Number = 19,

$1^2 + 9^2 = 82$,

$8^2 + 2^2 = 68$,

$6^2 + 8^2 = 100$,

$1^2 + 0^2 + 0^2 = 1$

19 is not a happy number because the number of cycles exceeded 3.

Access 1000+ questions with detailed solutions on Quantitative Ability, Logical Ability, Verbal Ability and Technical Ability for FREE at

http://www.placementskey.com

PLACEMENTS KEY'S

Coding Challenge #9 (Question contd.)

Day - 5

Complete the following code satisfying al the test cases:

```
#include<stdio.h>
#include<math.h>
Int  main()
{
        int i,j,num,temp,sum=0;
        printf("Enter number\n");
        scanf("%d",&num);
       /*Complete the code*/
}
```

Access 1000+ questions with detailed solutions on Quantitative Ability, Logical Ability, Verbal Ability and Technical Ability for FREE at

http://www.placementskey.com

PLACEMENTS KEY'S

Coding Challenge #9 (C Solution)

Day - 5

```
#include<stdio.h>
#include<math.h>
int main()
{
 int i,j,num,temp,sum=0;
 printf("Enter number\n");
 scanf("%d",&num);      //enter the number
 while(sum!=1 && sum!=4)
 {
          sum=0;
          while(num>0)
            {
                j=num%10;
                sum+=(j*j);    //performing the squares
               num=num/10;
                }
  num=sum;
 }
if(sum==1)        //checks for sum==1
  printf("Happy number\n");
else
  printf("Unhappy number\n");
}
```

Access 1000+ questions with detailed solutions on Quantitative Ability, Logical Ability, Verbal Ability and Technical Ability for FREE at

http://www.placementskey.com

PLACEMENTS KEY'S

Coding Challenge #9 (JAVA Solution)

Day - 5

```
import java.util.*;
public class HappyNumber
{
	public static void main(String[] args)
	{
		Scanner input=new Scanner(System.in);
		System.out.println("Enter the number");
		int num = input.nextInt();
		int sum=0;
		int count =0;
		int temp;
		sum=num;
		while(sum>=10){
			num=sum;
			sum=0;
			while(num!=0){
				temp=num%10;
				sum=sum + (temp*temp);
				num=num/10;
			}count++;
		}
		if(sum==1 && count<4)
			System.out.println("Happy number");
		else
			System.out.println("Unhappy number");
	}
}
```

Access 1000+ questions with detailed solutions on Quantitative Ability, Logical Ability, Verbal Ability and Technical Ability for FREE at

http://www.placementskey.com

PLACEMENTS KEY'S

Coding Challenge #10 (Question)

Day - 5

Akash wants to check the whether he can count the number of vowels, consonants, digits, white spaces in a sentence that he is going to enter?

Sample Input 0:

Placement Key

Sample Output 0:

Vowels : 4

Consonants : 8

Digits : 0

White Spaces : 1

Sample Input 1:

Code Challenge3

Sample Output 1:

Vowels : 5

Consonants : 8

Digits : 1

White Spaces : 2

Access 1000+ questions with detailed solutions on Quantitative Ability, Logical Ability, Verbal Ability and Technical Ability for FREE at

http://www.placementskey.com

PLACEMENTS KEY'S

Coding Challenge #10 (Question contd.)

Day - 5

Complete the following code:

```
#include <stdio.h>
int main()
{
        char line[1000];
        int vowels=0,consonant=0,digit=0,space=0;
       /*complete the code*/
}
```

Access 1000+ questions with detailed solutions on Quantitative Ability, Logical Ability, Verbal Ability and Technical Ability for FREE at

http://www.placementskey.com

PLACEMENTS KEY'S

Coding Challenge #10 (C Solution)

Day - 5

```c
#include <stdio.h>
int main()
{
        char line[1000];
        int vowels=0,consonant=0,digit=0,space=0;
        printf("Enter a line of string: ");
        scanf("%[^\n]*c",&line);            //delimiter operator is used to take
input
        for(int i = 0;line[i]!='\0';i++)
          {
                if (line[i] == 'a' || line[i] == 'e' || line[i] == 'i' ||
                    line[i] == 'o' || line[i] == 'u' || line[i] == 'A' ||
                    line[i] == 'E' || line[i] == 'I' || line[i] == 'O' || line[i] == 'U')
                {
                        vowels++;                       //count of vowels
                 }
                else if ((line[i] >='a'&&line[i]<='z') || (line[i]>='A'&&line[i]<='Z'))
                 {
                     consonant++;                       //count of consonants
                 }
                 else if (line[i] >= '0' && line[i] <= '9')
                   {
                        digit++;                        //count of digits
                   }
                else if (line[i]==' ')
                {
                  space++;                          //count of spaces
                 }
          }
   printf("Vowels: %d", vowels);
   printf("\nConsonants: %d", consonant);
   printf("\nDigits: %d", digit);
   printf("\nWhite spaces: %d", space);
   return 0;
}
```

Access 1000+ questions with detailed solutions on Quantitative Ability, Logical Ability, Verbal Ability and Technical Ability for FREE at

http://www.placementskey.com

PLACEMENTS KEY'S

Coding Challenge #10 (C Solution contd.)

Day - 5

```
printf("Vowels: %d", vowels);
printf("\nConsonants: %d", consonant);
printf("\nDigits: %d", digit);
 printf("\nWhite spaces: %d", space);
  return 0;
}
```

Access 1000+ questions with detailed solutions on Quantitative Ability, Logical Ability, Verbal Ability and Technical Ability for FREE at
http://www.placementskey.com

PLACEMENTS KEY'S

Coding Challenge #10 (JAVA Solution)

Day - 5

```
import java.util.*;
public class SentenceCount
{
	public static void main(String[] args)
	{
		Scanner input = new Scanner(System.in);
		System.out.println("Enter the sentence");
		String test = input.nextLine();
		test = test.toLowerCase();
		int v=0,c=0,d=0,s=0;
		for(int i=0;i<test.length();i++){
			char ch = test.charAt(i);
			if(ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u')
				v++;
			else if((ch>='a' && ch<='z'))
				c++;
			else if(ch>='0' && ch<='9')
				d++;
			else if(ch==' ')
				s++;
		}
		System.out.println("Vowels : " + v);
		System.out.println("Consonants : " + c);
		System.out.println("Digits : " + d);
		System.out.println("White Spaces : " + s);
	}
}
```

Access 1000+ questions with detailed solutions on Quantitative Ability, Logical Ability, Verbal Ability and Technical Ability for FREE at

http://www.placementskey.com