PCC's CODE CRAFT 01

There are numerous approaches and solutions for the problems. Some are given here for reference purposes.

Contest Link : https://www.hackerrank.com/code-craft-01

Contents

Problem 1: Is_it_Even

Problem Statement :

Given an integer input, You'll have to check if the given number is even or odd. you'll have to print "even" if the given number is even. "odd" otherwise (lower case).

Further details :

Input Format

int n

Constraints

0 < n < 100000

Output Format

string : "even" or "odd"

```
Sample input: 10
output: even
```

Solution:

```
#include <stdio.h>
int main() {
    int number;
    // Input from user
    scanf("%d", &number);
    // Checking if the number is even or odd
    if (number % 2 == 0) {
        printf("even\n");
    } else {
        printf("odd\n");
    }
    return 0;
}
```

Problem 2: Water_Park

Problem Statement:

To enter the water slide, a person must have a weight of at most 100 Kg and a height of at least 4 ft. Clan Mate weighs W Kg and his height is H., which are given as input. Is he/she allowed to enter the water slide? print **1** if eligible or else print **0**

Further Details:

Input Format

1 integer(weight) and 1 float(height)

Constraints

0 < H < 100000 0 < W < 100000

Output Format

integer 0 or 1

Sample Input 0

```
65
4.5
```

Sample Output 0

```
1
```

Solution :

```
#include <stdio.h>

int main() {
    // Declare variables to store weight and height
    int weight;
    float height;

    // Get input for weight and height
    scanf("%d", &weight);
    scanf("%f", &height);

    // Check eligibility criteria
    if (weight <= 100 && height >= 4.0) {
        // Person is eligible
        printf("1\n");
    } else {
        // Person is not eligible
        printf("0\n");
    }
    return 0;
}
```

Problem 3: airline_needs

Problem Statement:

Clan Airline has alloted X flights to fly from Delhi to Banglore.Each flight has a capacity of 100 passengers. Today N passengers wish to fly from Delhi to Banglore. Our task now is to check if the no.of flights are sufficient or any additional flights required. print 0 if flights are sufficient, if additional are required, print the number of new flights required.

Further details:

Input Format

two integers i.e. X ,N

Constraints

0 < X < 100000,0 < N < 100000

Output Format

integer

Sample Input 0

```
4 590
```

Sample Output 0

```
2
```

Solution:

```
#include <stdio.h>

int main() {
    // Declare variables to store the number of flights and passengers
    int X, N;

    // Get input for the number of flights and passengers
    scanf("%d", &X);

    scanf("%d", &N);

    // Calculate the number of additional flights required
    int additionalFlights = (N + 99) / 100 - X;

    // Check if additional flights are required
    if (additionalFlights <= 0) {
        // Flights are sufficient
        printf("0\n");
    } else {
        // Additional flights are required
        printf("%d\n", additionalFlights);
    }

    return 0;
}
```

Problem 4: Vowel Check

Problem Statement:

Given a character input, the task is to print if it is a vowel or not. If it is a vowel, print "yes". If it is not a vowel, print "no".

Further Details:

Input Format

character

Constraints

No. of characters = 1

Output Format

String

Sample Input 0

```
A
```

Sample Output 0

```
yes
```

Sample Input 1

```
b
```

Sample Output 1

```
no
```

Solution :

```
#include <stdio.h>

int main() {
    char ch ;
    scanf("%c",&ch);

    switch (ch) {
        case 'a':
        case 'A':
        case 'e':
        case 'E':
        case 'i':
        case 'I':
        case 'o':
        case 'O':
        case 'u':
        case 'U':
            printf("yes");
            break;
        default:
            printf("no");
    }
    return 0;
}
```

Problem 5 : Perfect_Square

Problem Statement:

Given a number N, determine whether N is a perfect square or not. If N is a perfect square, print its square root. Else, print "no".

Further details:

Input Format

1 integer

Constraints

1

Output Format

An integer or string

Sample Input 0

```
25
```

Sample Output 0

```
5
```

Explanation 0

The square root of 25 is 5, Hence 25 is a perfect square.

Sample Input 1

```
19
```

Sample Output 1

```
no
```

Solution :

```
/*(This code did not use sqrt() function, as you are not aware of math.h
yet) The code can be optimized further. */

#include <stdio.h>

int main() {
    int N;

    // Input
    scanf("%d", &N);
    if(N==0)
        printf("0");

    // Check if N is a perfect square
    int isPerfectSquare = 0;
    int i;
    for (i = 1; i * i <= N; ++i) {
        if (i * i == N) {
```

```
            isPerfectSquare = 1;
            break;
        }
    }

    // Output
    if (isPerfectSquare == 1) {
        printf("%d",i);
    } else {
        printf("no");
    }
    return 0;
}
```

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