Questions: Question 1: Print this pattern using any loop

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2.Write a program in C language to reverse a number.

3.Write a program that repeatedly asks the user to enter a number and sums the numbers until the user enters 0.

4. Write a program that calculates the average grade of a student. The user should enter grades for a certain number of subjects. The program should continue to accept grades until the user enters a sentinel value (e.g., -1). After entering grades, the program should compute and display the average grade.

5. Write a program that generates and prints the multiplication table for a given number up to 10.

6.You want to calculate the factorial of a given number. Factorial is commonly used in mathematics and statistics, such as calculating combinations and permutations.

7.Prompt the user to enter a password and keep asking until the correct password is entered. This is common in authentication systems.

Questions for conditional statements:

1. Suppose you are working as airport check-in-agent at the airport (check-in-agent is the person who checks the weight of the luggage) Now as a software engineer you want to create a software that takes the luggage weight as inputs. Now if the luggage weight exceeds 15 kg, then charge them Rs. 100 per kg fine and if the luggage weight exceeds 20 kg, then charge them a fine of Rs. 200 per kg and if the luggage weight exceeds 25 kg, then charge them a fine of Rs. 300 per kg.

(Hint: Take the luggage weight as the input and use conditional statements)

Desired Output:

Enter the weight of your luggage.

60

Please pay the fine of Rs. 100

1. Messi and Cristiano are two best friends. Both loves to help each other. Cristiano has a small problem. Cristiano always forget the name of the days (Sunday, Monday, ….). Now Messi wants to solve this problem. So, he asks your help to solve this problem. To help both Messi and Cristiano, write a software that can take any number from 1-7 as inputs and give the corresponding name of the day. For Example : 1 -> Sunday , 2->Monday etc.

(Hint: use switch statements)

Desired Output:

Hola Cristiano! Please Enter any number to find the day

2

It’s Monday

Note: If Cristiano enters any other number then display “Sorry Cris ! Number is invalid “

1. Now it appears that Messi cannot remember the name of the months. So in return Cristiano also wants to help Messi. For that, he also needs your help.

Now using the same logic, write a software that can take any number from 11-12 as inputs and give the corresponding name of the month. For Example:

1 -> January

2-> February

Desired Output:

Hola Messi! Please Enter any number to find the month

9

It’s September

1. Now you are working as security engineer at a reputed bank. The bank assigns you to create a vault that can be only accessed if someone gives the correct pass code.

As an engineer, create a software program that takes the pass code as inputs and display “Vault Opened” if the input code matches the pass code. If it does not match the pass code, then display “Incorrect Code “

Suppose the correct pass code is “12345”.

(Hint:

Int main (){

int correct\_passcode = 12345;

//then take the input code

// and after taking the input code compare it with correct\_passcode

})