***PSEUDO-CODE***

***Question No 1***

***Q1*: *The program is made for deciding which of the two user defined numbers is greater. if the numbers entered by the user are same, then it should display a message accordingly.***

***Answer***

Start:

Print Please enter the value of the first number

Num1 Input first number

Print Please enter the value of the second number

Num2 Input second number

If Num1 == Num2

Print Both number are equal

Stop

Else

If Num1 > Num2

Print The first number is great

Else

Print The second number is great

Stop

***Question No 2***

***Q2*:** ***The program is made for deciding either a candidate who is applying for Pakistan armed forces is eligible or not. An eligible candidate must fulfil all necessary conditions as give in the following criteria:***

***Answer***

Start:

Print Please enter nationality

nation Input nationality

If nation == Pak or nation == AJK

Yes ( Print Please enter your age

Age Input age

If Age >= 18 or Age <= 22

Yes ( Print Please enter educational year

EDU Input EDU

If EDU >= 14

Yes (Print Yes, you seem eligible for the Pakistani armed forces)

No (Print Sorry, for eligible you must have at least 14 year of education))

No (Print Sorry, for eligible your age must be between 18 -22))

No (Print Sorry, for eligible you must be Pakistani national or AJK national)

***Question No 3***

***Q3: The following flowchart is meant to ask a number from user and add next number to it. The process of addition should be repeated until the sum would become 100 or greater. In the case where user enters the number > 100, the program should be stopped. In between the steps, you have to count how many iterations it took for attaining the sum equals to 100.***

***Answer***

Start:

Print Please enter number

Num Input number

If Num >= 100

Yes (Print Sorry, the starting is either equal or great than 100. Thus, we cannot attain sum of 100)

No (Sum Num

Iteration Counter 0

J {Num + 1} To 100

IterationCounter IterationCounter + 1

Sum Sum + j

If Sum >= 100

Yes (Print Total %d iteration(s) made the sum equal to 100 IterationCounter)

No (Next J))

Stop

***2 AWESOMENESS***

***Question No 1***

***Q 1: You have to ask road type and speed of the vehicle from user and then decide whether a car is over-speeding, is under-speed or it is moving with the allowed speed. The allowed speed limit is given in the following table. See the following conditions:***

***Answer***

Read input, Road

Read input, speed

Print Ask road Road and speed

Local=Road

Or Main Street=Road

Yes No

High =Road

Or

Main Road = Road

Mzammm

Local == road

Or

Main

Yes No

Yes No

Main Road == Road

Speed ==

20-30

Main

Speed ==

31-40

Main

Yes Yes No Yes

No Yes

Speed

==

91-110

Speed ==

41-90

No

Print under-speed (Allowed)

Print over-speeding

**Pseudo codes**

Start:

Print Ask Road and speed

Road Input Road

Speed Input speed

If Road = Local Street or Road = Main Street

Yes (If Road = Local Street

Yes (If Speed == 20-30

Yes (Print over-speeding)

No (Print under-speed (Allowed))

No (If Speed == 31-40

Yes (Print over-speeding)

No (Print under-speed (Allowed))

No (If Road = Main Road or Road = High way

Yes (If Road = Main Road

Yes (If Speed == 41-90

Yes (Print over-speeding)

No (Print under-speed (Allowed))

No (If Speed == 91-110

Yes (Print over-speeding)

No (Print under-speed (Allowed)))

Stop.

***Question No 2***

***Q2: BUNDOO KHAN is famous restaurant in Karachi, they have almost manual process. Now they are willing to use computers and need a computer program that helps them to process their orders. They defined their process as: When a user comes and asks about deals, we replied we have three deals for as per different budget and our deals are associated with days. Often we have complementary food to our customers. You have to work out a solution that asks user to enter DAY as input, then it asks how much MONEY you have, if DAY and MONEY is suitable for deal then algorithm suggest it otherwise says “SORRY YOU CAN NOT HAVE ANY DEAL IN THIS RANGE, YOU CAN BUY SINGLE ITEM”. They showed following menu that bears information***

***Answer***

Print Ask DAY and MONEY

Read, Mon51 = 1,2

Mon101 = 1,2,3, sweets

Tus51 = 1,4

Tus101 = 1,4,5, shake

Fir51 = 1,6

Fir101 = 1,6,7, Falooda

Read input, DAY

Read Input, MONEY

Day = Mon or DAY = Tus or DAY = Wednes

DAY = Thurs

DAY = Fir

Day=Sat or Day=Sun

Yes No No

Yes

MONEY > 15 or < 50

Day = Mon or DAY = Tus or DAY = Wednes

No

No

Yes

Yes

Yes

Print Buffetis “DAY” AND “MONEY”

Day == Mon



Print Deal 01 + complementary soup

No Yes

MONEY < 15 or > 50

No

NO

Print Deal1 is only available on “DAY” AND “MONEY”

MONEY < 51 or > 100

MONEY < 51 or > 100

NO

NO

No

SORRY YOU CAN NOT HAVE ANY DEAL IN THIS RANGE, YOU CAN BUY SINGLE ITEM

Yes Yes

Option = DAY + 51

Option = DAY + 101

Print Deal (‘Option’) is only available on “DAY” AND “MONEY”

Print Deal (‘Option’) is only available on “DAY” AND “MONEY”

**Pseudo codes**

Start:

Print Ask DAY and MONEY

DAY Input Day

MONEY Input Money

If DAY = Mon or DAY = Tues or DAY = Wednes or DAY = Thurs or DAY = Fri or Day = Weekends

Yes (If DAY = Mon or DAY = Tues or DAY = Wednes

Yes (If DAY = Mon

Yes (If MONEY = 15-51

Yes (Print Deal1 is only available on “DAY” And “MONEY)

No (If MONEY = 51-100

Yes (Print Deal 01 and Deal 02 is only available on “DAY” And “MONEY)

No (Print Deal 01, Deal 02, Deal 03 + complementary sweets on “DAY” And “MONEY)

No (Print SORRY YOU CAN NOT HAVE ANY DEAL IN THIS RANGE, YOU CAN BUY))

No (If DAY = Tues or DAY = Wednes

Yes (If MONEY = 15-51

Yes (Print Deal1 is only available on “DAY” And “MONEY)

No (If MONEY = 51-100

Yes (Print Deal 01 and Deal 04 is only available on “DAY” And “MONEY)

No (Print Deal 01, Deal 04, Deal 05 + complementary shake on “DAY” And “MONEY)

No (Print SORRY YOU CAN NOT HAVE ANY DEAL IN THIS RANGE, YOU CAN BUY))

No (If DAY = Thurs or DAY = Fri

Yes (If MONEY = 15-51

Yes (Print Deal1 is only available on “DAY” And “MONEY)

No (If MONEY = 51-100

Yes (Print Deal 01 and Deal 06 is only available on “DAY” And “MONEY)

No (Print Deal 01, Deal 06, Deal 07 + complementary Falooda on “DAY” And “MONEY)

No (Print SORRY YOU CAN NOT HAVE ANY DEAL IN THIS RANGE, YOU CAN BUY))

No ((If MONEY = 15-51

Yes (Print Deal 01 + complementary soup is only available on “DAY” And “MONEY)

No (Print Buffet is only available on “DAY” And “MONEY)

Stop.

***3. PSEUDOCODES & ALGORITHMS***

***Question No 1***

***Q1.To check whether a triangle is valid or not when the three angles of the triangle are entered through the keyboard. A triangle is valid if the sum of all the three angles is equal to 180 degree***

***Answer***

|  |  |
| --- | --- |
| ***PSEUDOCODES*** | ***ALGORITHMS*** |
| Start:  Print Please enter angles  Angle1 Input Angle1  Angle2 Input Angle2  Angle3 Input Angle3  Sum Angle1 + Angle2 + Angle3  If Sum == 180  Yes (Print the triangle is valid)  No (Print the triangle is not valid)  Stop | Start:  Print Please enter angles  Angle1 = Input Angle1  Angle2 = Input Angle2  Angle3 = Input Angle3  Sum = Angle1 + Angle2 + Angle3  If Sum == 180  Yes (Print the triangle is valid)  No (Print the triangle is not valid)  Stop |

***Question No 2***

***Q*** ***2.If the marks obtained by a student in five different subject are Find out the aggregate marks and percentage marks obtained by the students .Assume that the maximum marks can be obtained by students in each subject is 100.***

***Answer***

|  |  |
| --- | --- |
| ***PSEUDOCODES*** | ***ALGORITHMS*** |
| Start:  Print Please enter marks  mark1 Input Mark1  mark2 Input Mark2  mark3 Input Mark3  mark4 Input Mark4  mark5 Input Mark5  max mar 100 \* 5  Marks mark1 + mark2 + mark3 + mark4 + mark5  Total Marks / max mar \* 100  Print Total%  Stop | Start:  Print Please enter marks  mark1 = Input Mark1  mark2 = Input Mark2  mark3 = Input Mark3  mark4 = Input Mark4  mark5 = Input Mark5  max mar = 100 \* 5  Marks = mark1 + mark2 + mark3 + mark4 + mark5  Total = Marks / max mar \* 100  Print Total%  Stop |

***Question No 3***

***Q*** ***3*** ***If the ages Of RAM, SHAM and AJAY are input through the keyboard .Design pseudo code and algorithm both to determine the youngest of the three***

***Answer***

|  |  |
| --- | --- |
| ***PSEUDOCODES*** | ***ALGORITHMS*** |
| Start:  Print Please enter marks  A Input RAM  B Input SHAM  C Input AJAY  If A = B = C  (Print three are same age)  Else if A >= B Or A >= C (1)  (Print “A” is Youngest)  Else if B<= A or B >= C  (Print “B” is Youngest)  Else  (Print “C” is Youngest)  Stop. | Start:  Print Please enter marks  A = Input RAM  B = Input SHAM  C = Input AJAY  If A = B = C  (Print three are same age)  Else if A >= B Or A >= C (1)  (Print “A” is Youngest)  Else if B<= A or B >= C  (Print “B” is Youngest)  Else  (Print “C” is Youngest)  Stop. |

END