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Scripting AT1.3

Pseudo Code

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# Write pseudo code that reads two numbers and multiplies them together and prints out their product.

PROGRAM MultiplyNumbers:

Read A;

Read B;

C = A\*B;

Print C;

END.

# Write pseudo code that performs the following: Ask a user to enter a number. If the number is between 0 and 10, print the word blue. If the number is between 10 and 20, print the word red. If the number is between 20 and 30, print the word green. If it is any other number, print that it is not a correct colour option. Use a nested IF construct.

PROGRAM DetermineColour:

Read A;

IF (A > 0 AND A =< 10)

THEN Print “Blue”;

ELSE IF (A > 10 AND A =< 20)

THEN Print “Red”;

ELSE IF (A > 20 AND A=<30)

THEN Print “Green”;

Else

Print “That is not a correct colour option”

END IF

END.

# Print all the numbers from 50 down to 10 using a FOR loop

PROGRAM COUNTDOWN50TO10:

FOR(A = 50 to 10)

Print A;

ENDFOR

END.

# Print all the numbers from forty down to five using a WHILE loop

PROGRAM COUNTDOWN40TO5:

A = 40

WHILE(A >= 5)

Print A;

Decrement A by one;

END.

# During a code review the following pseudo code was reported as faulty, examine the logic and make the necessary corrections so the output is correct. The algorithm inputs 20 numbers and outputs how many were positive, how many are negative and how many are zeros (there are 3 errors in this algorithm). Re-write adding indentation, and corrections. Add suitable comments to explain your logic.

PROGRAM CODEREVIEW:

Variables need to be initialised as 0, else the program will determine that a negative, positive and 0 was entered.

NegativeInt = 0;

PositiveInt = 0;

ZeroInt = 0;

Count needs to be set to 0 else loop will run only 19 times

FOR(Count = 0 to 20)

READ number;

IF (number < 0)

THEN NegativeInt = NegativeInt + 1;

ELSE IF (number > 0)

THEN PositiveInt = PositiveInt + 1;

ELSE IF (number == 0)

THEN ZeroInt = ZeroInt + 1;

ENDIF

Count = Count + 1;

ENDFOR

If Print statements are located within for loop, 20 individual incrementing counts will be printed to the screen instead of 1 total count.

Print NegativeInt;

Print PositiveInt;

Print ZeroInt;

END.

# The following pseudo code is displaying output for both status types (M and F). Debug and correct the pseudo code so only the ‘F’ status is displayed. Add suitable comments to explain your logic.

PROGRAM STATUSYEARS:

Read status;

Read years;

IF(years > 5)

THEN IF(status == ‘F’)

THEN Print “3 weeks vacation”;

ELSE

THEN Print “2 weeks vacation”;

ENDIF

ENDIF

END.