**Unit 8 Assignment 1**

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Rewrite the following code segment using a multiple-selection statement in the following languages:  
if ((rate == 1) || (rate == 2)) factor = 2 \* rate - 1  
if ((rate == 3) || (rate == 5)) factor = 3 \* rate + 1  
if (rate == 4) factor = 4 \* rate - 1  
if ((rate == 6) || (rate == 7) || (rate == 8)) factor = rate – 2  
else factor = rate

Pascal

program Pascal;

var

rate: integer=5;

var

factor:integer=1;

begin

Case rate of

1,2: factor := 2 \* rate - 1;

3,5: factor := 3 \* rate + 1;

4: factor := 4 \* rate - 1;

6,7,8: factor := rate-2;

else

factor:=rate;

end;

writeln(factor)

end.

Text

Description automatically generated

b. C

#include <stdio.h>

int main() {

int rate=5,factor=1;

switch(rate)

{

case 1:

case 2:

factor = 2 \* rate - 1;

break;

case 3:

case 5:

factor = 3 \* rate + 1;

break;

case 4:

factor = 4 \* rate - 1;

break;

case 6:

case 7:

case 8:

factor = rate-2;

break;

default:

factor = rate;

break;

}

printf("%d",factor);

return 0;

}

Graphical user interface, text, application

Description automatically generated

FORTRAN 77 (not one minute later)

program Fortran

integer rate,factor

rate=5

factor=1

IF (rate .EQ. 1 .OR. rate .EQ. 2) THEN

factor = 2 \* rate - 1

ELSE IF(rate .EQ. 3 .OR. rate .EQ. 5) THEN

factor = 3 \* rate + 1

ELSE IF(rate .EQ. 4) THEN

factor = 4 \* rate - 1

ELSE IF(rate .EQ. 6 .or. rate .EQ. 7 .or. rate .EQ. 8 ) THEN

factor=rate-2

ELSE

factor=rate

ENDIF

WRITE(\*,\*) factor

end program Fortran

Text, application

Description automatically generated

d. Python

rate=5;

factor=1;

if rate==1 or rate==2:

factor = 2 \* rate - 1

elif rate == 3 or rate == 5:

factor = 3 \* rate + 1

elif rate==4:

factor = 4 \* rate - 1

elif rate == 6 or rate == 7 or rate == 8:

factor = rate-2

else:

factor=rate

print(factor)

Output:

Graphical user interface, text, application

Description automatically generated

e. Ada

with Ada.Text\_IO; use Ada.Text\_IO;

procedure Hello is

begin

declare

rate : Integer := 5;factor : Integer := 1;

begin

case rate is

when 1|2 =>

factor := 2 \* rate - 1;

when 3|5 =>

factor := 3 \* rate + 1;

when 4 =>

factor := 4 \* rate - 1;

when 6|7|8 =>

factor := rate - 2;

when others =>

factor := rate;

end case;

Ada.Text\_IO.Put\_Line (Integer'Image (factor));

end;

end Hello;

Text

Description automatically generated