

جمل التحكم والشرط والتكرار**PROGRAM CONTROL , CONDITION AND LOOP STATEMENTS****1- الجمل الشرطية :-**

تقسم جمل الشرط الى نوعين وهي :-

1- جملة اذا الشرطية ( if – statement )

2- جملة التوزيع ( select – case )

**1- جملة اذا الشرطية ( if – statement ) :-**

وتستخدم للتحكم بطريقة سير البرنامج اعتمادا على تحقق الشرط ( condition ) ،

ولها ثلاث صيغ :-

1- تستخدم if لوحدها في حالة استخدام شرط بالشكل التالي :-

```
if condition then
statement
endif
```

**Ex1\Write a Fortran program to read a number and to find out if the number is positive or not**

The screenshot shows a Fortran program in a debugger window. The source code is as follows:

```
program rr
real::x
print*,'enter number of x='
read*,x
if (x>0) then
print*,'x is positive number'
end if
end program rr
```

The execution output shows the program running and displaying the following text:

```
enter number of x=
1
x is positive number
Press any key to continue
```

2- جملة (if/else) : يستخدم الامر (else) كجزء من الجملة الشرطية (if) فإذا تحقق الشرط في جملة (if) يتوجب عليه تحقيق النتائج التالية لجملة (if) (اي ما قبل جملة (else) مباشرة ( و ألا تحقق النتائج مابعد (else) و يأخذ الصورة التالية :

```
if condition
statement(s)
else
statement(s)
endif
```

**EX1\Write a Fortran program to read a number and to find out if the number is positive or not.**

The screenshot shows a Fortran program in a text editor and its execution in a terminal window. The program reads a number and checks if it is positive. If the number is positive, it prints 'x is positive number'. If the number is zero or negative, it prints 'this number equal zero or negative'. The terminal output shows the user entering '-2' and the program printing the corresponding message.

```
program rr
real::x
print*,'enter number of x='
read*,x
if (x>0) then
print*,'x is positive number'
else
print*,'this number equal zero or negative'
end if
end program rr
```

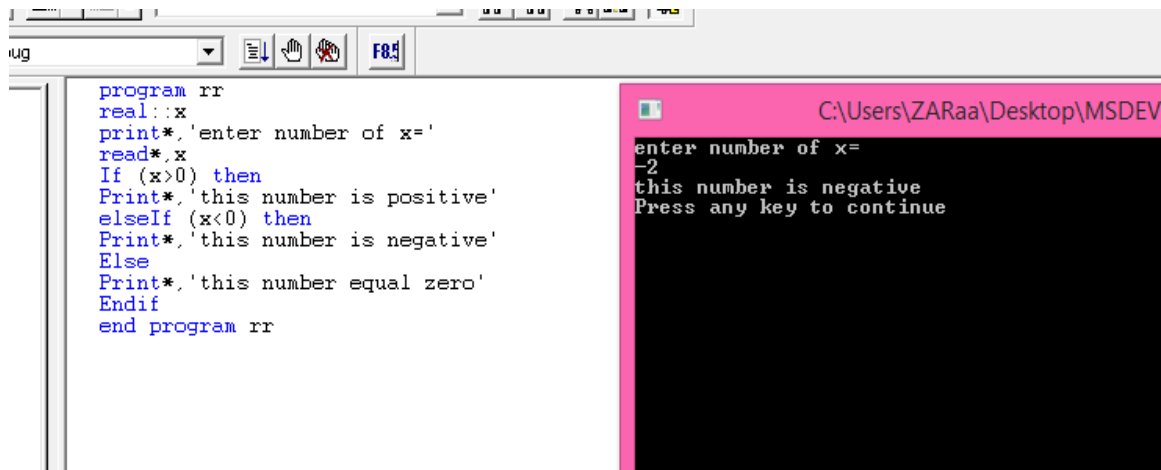
```
C:\Users\ZARaa\Desktop\MSDEV\Projects\www\Debi
enter number of x=
-2
this number equal zero or negative
Press any key to continue
```

3- الجملة ( if / elseif ) :- الغرض من هذه الصورة من صور جملة الشرط if هو اختبار مدى تحقق اكثر من شرط وياخذ الصيغة التالية :-

```
If condition then
Statement
Elseif condition then
Statement
Else
Statement
End if
```

Ex\Write a Fortran program to read a number and to find out if the number is positive, negative or zero.

```
program rr
real::x
print*,'enter number of x='
read*,x
If (x>0) then
Print*,'this number is positive'
elseif (x<0) then
Print*,'this number is negative'
Else
Print*,'this number equal zero'
Endif
end program rr
```

The image shows a screenshot of a computer screen with two windows. The left window is a text editor showing the Fortran code from the previous block. The right window is a terminal window titled 'C:\Users\ZARaa\Desktop\MSDEV' with a pink title bar. The terminal output shows the program's execution: it prompts 'enter number of x=' and receives the input '-2'. The program then outputs 'this number is negative' and 'Press any key to continue' before returning to the prompt.

```
program rr
real::x
print*,'enter number of x='
read*,x
If (x>0) then
Print*,'this number is positive'
elseif (x<0) then
Print*,'this number is negative'
Else
Print*,'this number equal zero'
Endif
end program rr
```

```
C:\Users\ZARaa\Desktop\MSDEV
enter number of x=
-2
this number is negative
Press any key to continue
```