3-1-1 請修改 while2nl.sh，輸入檔名時可以檢查檔案是否存在，不存在時應輸出錯誤提示並停止執行

先加入 if 判斷檔案是否存在
如果存在就開始跑 while 迴圈
if 判斷不在就輸出自訂的錯誤提示

```
#!/bin/bash
#Description: Use the loop (while) to simulate "nl" command.
#Write by 350 (weilin.jang@gmail.com)
#Version: v1.00

read -p "Please enter File-Name:" varFileName


noLine=1

if [ -e $varFileName ]
then
while read txtLine
do
        echo -e "\t $noLine $txtLine"
                let noLine=$noLine+1
done < $varFileName

else
        echo "$varFileName doesn't exsist"
fi

exit 0
```

輸入不存在的檔案 123456789 會說該檔不存在
而輸入之前題目做的 contacts 檔案就會開始讀取內容

```
iot@Xenial-Host:~/Rico/cc101/SS/homework$ ./while2nl.sh
Please enter File-Name:123456789
123456789 doesn't exsist
iot@Xenial-Host:~/Rico/cc101/SS/homework$ ./while2nl.sh
Please enter File-Name:contacts
         1 Rico 0800-000-123 rico555@cc101.com null null
         2 Crocodile 0200-556-555 null 150year in river
```

實際來看運作情形，當檔案不存在時，在進入 while 迴圈之前就掀被擋下去執行 else 裡面的 echo 指令

```
iot@Xenial-Host:~/Rico/cc101/SS/homework$ bash  -x while2nl.sh
+ read -p 'Please enter File-Name:' varFileName
Please enter File-Name:55
+ noLine=1
+ '[' -e 55 ']'
+ echo '55 doesn'\''t exsist'
55 doesn't exsist
+ exit 0
```

而當檔案存在時就會開始讀取檔案裡面的內容

```
iot@Xenial-Host:~/Rico/cc101/SS/homework$ bash  -x while2nl.sh
+ read -p 'Please enter File-Name:' varFileName
Please enter File-Name:contacts
+ noLine=1
+ '[' -e contacts ']'
+ read txtLine
+ echo -e '\t 1 Rico 0800-000-123 rico555@cc101.com null null'
         1 Rico 0800-000-123 rico555@cc101.com null null
+ let noLine=1+1
+ read txtLine
+ echo -e '\t 2 Crocodile 0200-556-555 null 150year in river'
         2 Crocodile 0200-556-555 null 150year in river
+ let noLine=2+1
+ read txtLine
+ exit 0
```

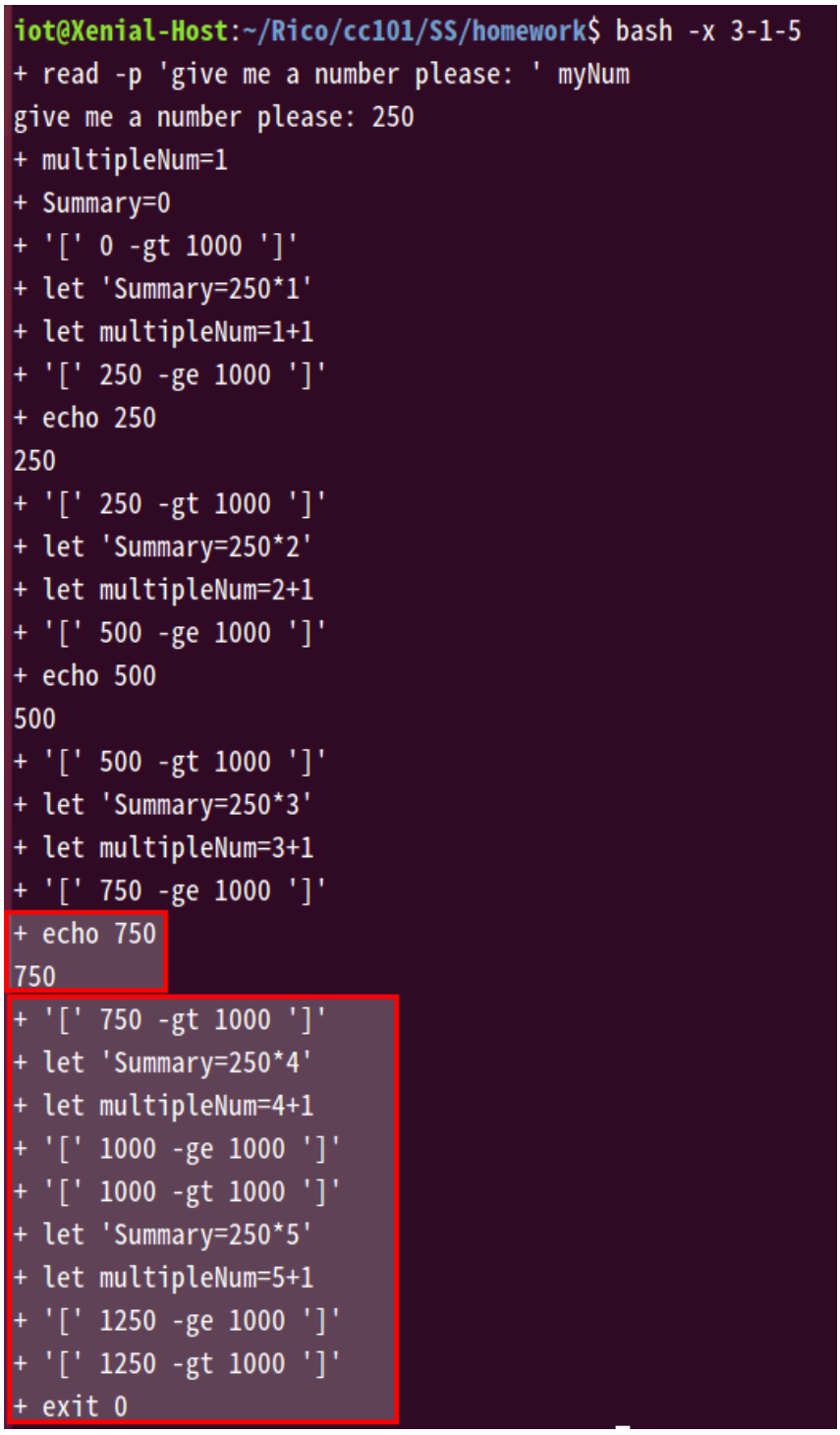
3-1-5 請以 until 為主，使用者可以輸入一數字後，計算出 1000 以內該數的倍數並印出該值於螢幕

```
#!/bin/bash
#Description : numder < 1000
#Written by Rico
#Version 1.00

read -p "give me a number please: " myNum

#要先從倍數1開始
multipleNum=1
#總和從0開始
Summary=0

#指總和大於1000不會執行do & done，所以只有小於才可以
until [ $Summary -gt 1000 ]
do
        let Summary=$myNum*$multipleNum
        #倍數一直往上乘*1 *2 *3 *4這樣
        let multipleNum=$multipleNum+1
        #重點在這，因為上面的until對於若是像是999的數字還是會繼續執行
        #再乘一次絕對會超過1000，所以這裡還要加個對於總和的判斷
        [ $Summary -ge 1000 ] || echo $Summary
done

exit 0
```

200 的倍數也不會有 1000 的數字結果

```
iot@Xenial-Host:~/Rico/cc101/SS/homework$ bash 3-1-5
give me a number please: 150
150
300
450
600
750
900
iot@Xenial-Host:~/Rico/cc101/SS/homework$ bash 3-1-5
give me a number please: 200
200
400
600
800
iot@Xenial-Host:~/Rico/cc101/SS/homework$
```

當數字為 250 時倍數往上乘最高只到 750，後面兩個步驟是為了防止最後產生的數字大於 1000 而寫的。



3-1-15 請說明並舉例迴圈 select

之前的題目剛好有略為提到 select 這個指令，簡單講就是可以一直做選擇，除非有個 shell 的中斷選項不然除了 ctrl+c ctrl+z 才有辦法終止
假如我今天懶的打指令去看常用的目錄，就拜託腳本讓我們無腦選就好，把常用的目錄選擇對應到 case 去做判斷，然後執行 ls

```
#!/bin/bash
#Description : ls everywhere?
#Written by Rico
#Version 1.00

PS3='where you want to look? '

select x in '/home/iot' '/home/iot/Rico' '/home/iot/Rico/cc101' quit
do
        case $x in
        '/home/iot')
                ls -al /home/iot
        ;;
        '/home/iot/Rico' )
                ls -al /home/iot/Rico
        ;;
        '/home/iot/Rico/cc101' )
                ls -al /home/iot/Rico/cc101
        ;;
        quit )
                exit 0
        ;;
        * )
                echo "not a choose"
        ;;
        esac
done

exit 0
```

```
iot@Xenial-Host:~/Rico/cc101/SS/homework$ bash 3-1-15
1) /home/iot             3) /home/iot/Rico/cc101
2) /home/iot/Rico        4) quit
where you want to look? 2
總計 16
drwxrwxr-x  3 iot iot 4096 Apr 14 13:22 .
drwxr-xr-x 47 iot iot 4096 Apr 29 20:19 ..
drwxrwxr-x 11 iot iot 4096 Apr 23 15:49 cc101
-rwxrw-r--  1 iot iot  656 Apr 11 22:18 forLenka
where you want to look? 3
總計 76
drwxrwxr-x 11 iot iot  4096 Apr 23 15:49 .
drwxrwxr-x  3 iot iot  4096 Apr 14 13:22 ..
drwxrwxr-x  3 iot iot  4096 Apr 21 16:58 AWS
-rw-rw-r--  1 iot iot 15425 Mar  2 17:18 cc101 seat.odt
drwxr-xr-x 19 iot iot  4096 Apr 27 14:33 CiscoOS
drwxrwxr-x  4 iot iot  4096 Apr 26 22:05 linux_server
drwxrwxr-x 13 iot iot  4096 Apr 14 15:25 Liunx
drwxrwxr-x  5 iot iot  4096 Apr 27 18:58 OpenStack
drwxrwxr-x  8 iot iot  4096 Apr  8 11:01 PA
drwxrwxr-x  7 iot iot  4096 Apr 28 15:46 SS
-rw-rw-r--  1 iot iot 15831 Mar 17 11:20 stardic manual.odt
drwxrwxr-x  4 iot iot  4096 Apr 26 19:11 TCPIP
drwx------  2 iot iot  4096 Mar 31 15:59 課堂錄音檔
where you want to look? 4
```

由此可以看出實際運作情形，當我選了第 3 選項後執行了 ls -al 的第 3 選項的路徑。

```
iot@Xenial-Host:~/Rico/cc101/SS/homework$ bash  -x 3-1-15
+ PS3='where you want to look? '
+ select x in ''\''/home/iot'\''' ''\''/home/iot/Rico'\''' ''\''/home/iot/Rico/cc101'\''' quit
1) /home/iot             3) /home/iot/Rico/cc101
2) /home/iot/Rico        4) quit
where you want to look? 3
+ case $x in
+ ls -al /home/iot/Rico/cc101
總計 76
drwxrwxr-x 11 iot iot  4096 Apr 23 15:49 .
drwxrwxr-x  3 iot iot  4096 Apr 14 13:22 ..
drwxrwxr-x  3 iot iot  4096 Apr 21 16:58 AWS
-rw-rw-r--  1 iot iot 15425 Mar  2 17:18 cc101 seat.odt
drwxr-xr-x 19 iot iot  4096 Apr 27 14:33 CiscoOS
drwxrwxr-x  4 iot iot  4096 Apr 26 22:05 linux_server
drwxrwxr-x 13 iot iot  4096 Apr 14 15:25 Liunx
drwxrwxr-x  5 iot iot  4096 Apr 27 18:58 OpenStack
drwxrwxr-x  8 iot iot  4096 Apr  8 11:01 PA
drwxrwxr-x  7 iot iot  4096 Apr 28 15:46 SS
-rw-rw-r--  1 iot iot 15831 Mar 17 11:20 stardic manual.odt
drwxrwxr-x  4 iot iot  4096 Apr 26 19:11 TCPIP
drwx------  2 iot iot  4096 Mar 31 15:59 課堂錄音檔
where you want to look?
```