


Assignment02_your student number (CDS2003)

Q01:

Count down a nonnegative number to zero

$n, n - 1, n - 2, \dots, 0$

A01:

Run Code assignment02_Q01_your student number  Save Python Settings

```
1 #Q01(the serial number of the question)
2 #Count down to zero(the task of the question)
3 def countdown(n):#define a function named countdown()
4     print(n)
5     if n==0:# Terminate condition
6         return
7     else:# Recursive call
8         countdown(n-1)
9 countdown(6)#test
```

Notifications 0 Profile Premium

Output: Finished Clear Console

```
Finished in 12 ms
6
5
4
3
2
1
0
```

Q02:

Calculate the factorial of a nonnegative integer n , where $n! = n \times (n - 1) \times (n - 2) \times \dots \times 2 \times 1$ and $0! = 1$

A02:

The screenshot shows a code editor interface. At the top, there is a 'Run Code' button, a text field containing 'assignment02_Q02_your student number', a 'Save' button, a language dropdown set to 'Python', and a settings gear icon. The code editor contains the following Python code:

```
1 #Q02(the serial number of the question)
2 ## factorial with Recursion(the task of the question)
3 def factorial_Recur(n):#define a function named factorial_Recur()
4     if n==0:# Terminate condition
5         return 1
6     return n*factorial_Recur(n-1)
7 print (factorial_Recur(6))#test
8
9
```

Below the code editor, there is an 'Output:' section with a 'Finished' status indicator and a 'Clear Console' button. The output area displays the text 'Finished in 23 ms' and the result '720'.

Q03:

.....

A03:

.....

Q04:

.....

A04:

.....

