

COS20007

Task 1.1P

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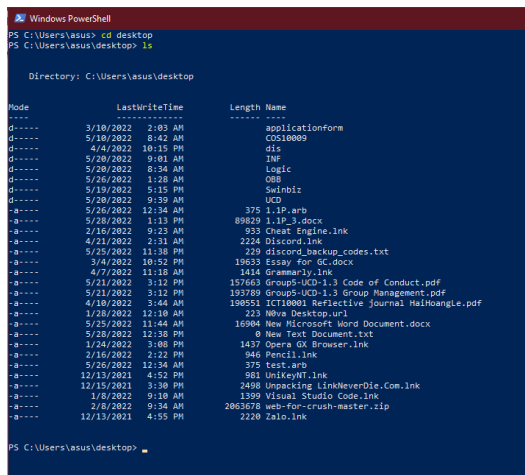
1. Explain the terminal instructions **cd**, **ls**, and **pwd**. Provide a screenshot showing these instructions being used correctly.

cd is change directory command to change the directory



```
Windows PowerShell
PS C:\Users\asus> cd desktop
PS C:\Users\asus\desktop>
```

ls is command to list all the document in a directory



```
Windows PowerShell
PS C:\Users\asus> cd desktop
PS C:\Users\asus\desktop> ls

Directory: C:\Users\asus\desktop

Mode                LastWriteTime         Length Name
----                -
d-----          3/10/2022  2:03 AM             applicationForm
d-----          5/10/2022  8:42 AM             COS10009
d-----          4/4/2022  10:15 PM             cis
d-----          5/20/2022  9:01 AM             INF
d-----          5/20/2022  8:34 AM             Logic
d-----          5/26/2022  1:28 AM             OOB
d-----          5/19/2022  5:15 PM             Swinbir
d-----          5/20/2022  9:59 AM             UCD
-a-----          5/26/2022  12:34 AM             375 1.IP.arb
-a-----          5/28/2022  1:13 PM             89029 1.IP 3.docx
-a-----          7/16/2022  9:23 AM             933 Cheat Engine.lnk
-a-----          4/21/2022  2:31 AM             2224 Discord.lnk
-a-----          5/25/2022  11:30 PM             229 discord_backup_codes.txt
-a-----          3/4/2022  10:52 PM             19633 Essay For GL.docx
-a-----          4/7/2022  11:18 AM             1414 Grammarly.lnk
-a-----          5/21/2022  5:12 PM             157663 Groups-UCD-1.3 Code of Conduct.pdf
-a-----          5/21/2022  5:12 PM             193789 Groups-UCD-1.3 Group Management.pdf
-a-----          4/10/2022  3:44 AM             190551 ICT10001 Reflective Journal HaiHoangLe.pdf
-a-----          1/28/2022  12:10 AM             223 Move Desktop.url
-a-----          5/25/2022  11:44 AM             16904 New Microsoft Word Document.docx
-a-----          5/28/2022  12:30 PM             0 New Text Document.txt
-a-----          1/24/2022  3:00 PM             1437 Opera GX Browser.lnk
-a-----          2/16/2022  2:22 PM             946 Pencil.lnk
-a-----          5/26/2022  12:34 AM             375 test.arb
-a-----          12/13/2021  4:52 PM             981 Unlited.lnk
-a-----          12/15/2021  3:30 PM             2498 Unpacking LinkNeverDie.Com.lnk
-a-----          1/8/2022  9:10 AM             1399 Visual Studio Code.lnk
-a-----          2/6/2022  9:34 AM             2803678 web-for-crash-master.zip
-a-----          12/13/2021  4:55 PM             2220 Zalo.lnk

PS C:\Users\asus\desktop>
```

Pwd is a command to show the current directory

```

Select Windows PowerShell
PS C:\Users\asus> cd desktop
PS C:\Users\asus\desktop> ls

Directory: C:\Users\asus\desktop

Mode                LastWriteTime         Length Name
----                -
d-----          3/10/2022   2:03 AM             applicationform
d-----          5/10/2022   8:42 AM             COS10009
d-----          4/4/2022   10:15 PM              dis
d-----          5/20/2022   9:01 AM              INF
d-----          5/20/2022   8:34 AM             Logic
d-----          5/26/2022   1:28 AM              OBB
d-----          5/19/2022   5:15 PM             Swinbiz
d-----          5/20/2022   9:39 AM              UCD
-a-----          5/26/2022  12:34 AM             375 1.1P.arb
-a-----          5/28/2022   1:13 PM          89829 1.1P_3.docx
-a-----          2/16/2022   9:23 AM           933 Cheat Engine.lnk
-a-----          4/21/2022   2:31 AM          2224 Discord.lnk
-a-----          5/25/2022  11:38 PM           229 discord_backup_codes.txt
-a-----          3/4/2022   10:52 PM          19633 Essay for GC.docx
-a-----          4/7/2022   11:18 AM           1414 Grammarly.lnk
-a-----          5/21/2022   3:12 PM          157663 Group5-UCD-1.3 Code of Conduct.pdf
-a-----          5/21/2022   3:12 PM          193789 Group5-UCD-1.3 Group Management.pdf
-a-----          4/10/2022   3:44 AM          190551 ICT10001 Reflective Journal HaiHoangle.pdf
-a-----          1/28/2022  12:10 AM           223 N0va Desktop.url
-a-----          5/25/2022  11:44 AM          16904 New Microsoft Word Document.docx
-a-----          5/28/2022  12:38 PM              0 New Text Document.txt
-a-----          1/24/2022   3:08 PM          1437 Opera GX Browser.lnk
-a-----          2/16/2022   2:22 PM           946 Pencil.lnk
-a-----          5/26/2022  12:34 AM           375 test.arb
-a-----         12/13/2021   4:52 PM           981 UniKeyMT.lnk
-a-----         12/15/2021   3:30 PM          2498 Unpacking LinkNeverDie.Com.lnk
-a-----          1/8/2022   9:10 AM           1399 Visual Studio Code.lnk
-a-----          2/8/2022   9:34 AM          2063678 web-for-crush-master.zip
-a-----         12/13/2021   4:55 PM           2220 Zalo.lnk

PS C:\Users\asus\desktop> pwd

Path
----
C:\Users\asus\desktop

PS C:\Users\asus\desktop>

```

2. Consider the following kinds of information, and suggest the most appropriate data type to store or represent each:

A person's name	String
A person's age in years	integer
A phone number	integer
A temperature in Celsius	double
The average age of a group of people	double
Whether a person has eaten lunch	boolean

3. Aside from the examples already given, come up with an example of information that could be stored as:

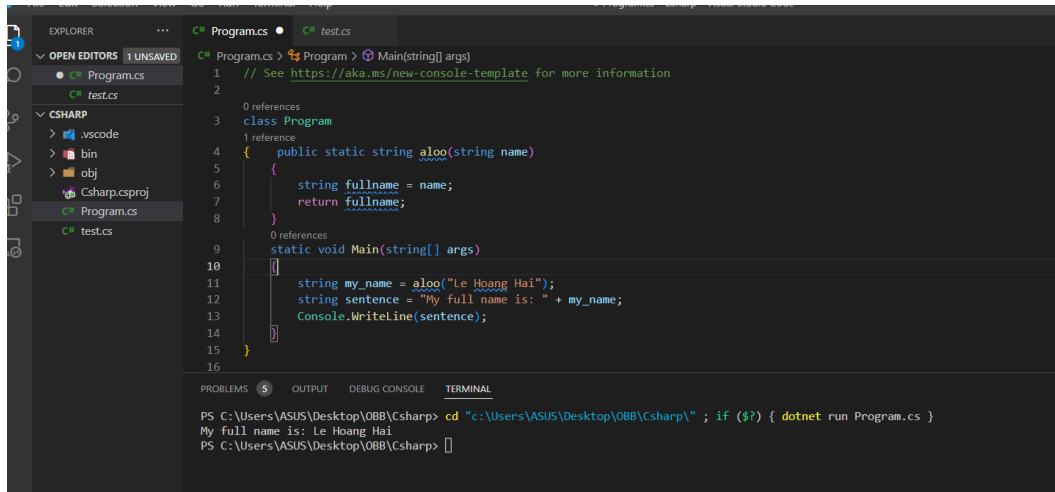
A string data type	School name
An integer data type	Number of player
A float data type	Amount of money I used
A boolean data type	Whether I absent the class

4. Fill out the following table, evaluating the value of each expression and identifying the data type the value is most likely to be.

Expression	Given	Value	Data Type
5		5	integer
TRUE		true	boolean

a	a = 2.5	2.5	double
1 + 2 * 3		7	integer
a and FALSE	a = TRUE	Fasle	boolean
a or FALSE	a = TRUE	True	boolean
a + b	a = 1 and b = 2	3	integer
2 * a	a = 3	6	integer
a * 2 + b	a = 1.5 and b = 2	5	integer
a + 2 * b	a = 1.5 and b = 2	5.5	double
(a + b) * c	a = 1, b = 1, and c = 5	10	integer
"Fred" + " Smith"		"Fred Smith"	String
a + " Smith"	a = "Wilma"	"Smith Wilma"	string

5. Explain the difference between **declaring** and **initialising** a variable.
- Declaring is giving a variable a name and a space for memory to store, but not a value.
 - Initializing is giving a variable a name, a memory and a value.
6. Explain the term **parameter**. Write some code that demonstrates a simple use of a parameter.
- Parameter is a variable in coding to pass information between function and method.

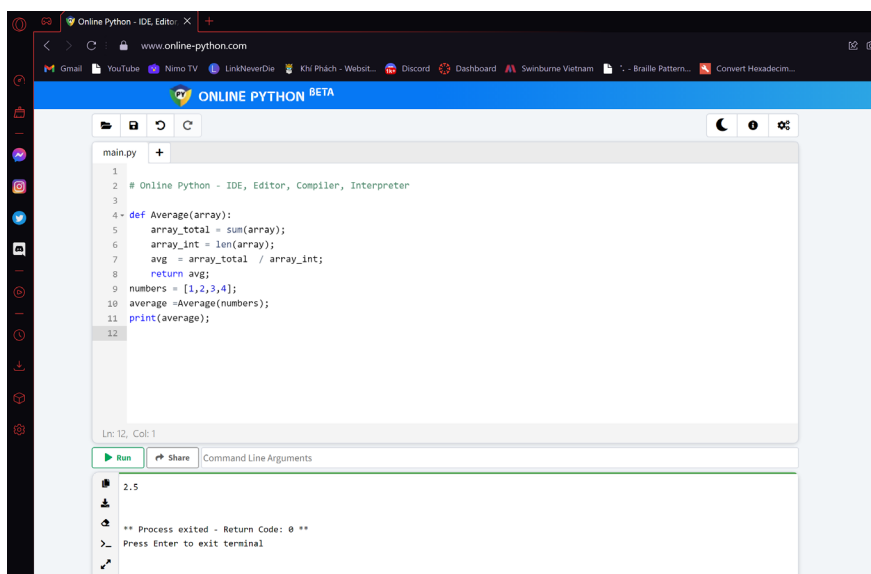


```
1 // See https://aka.ms/new-console-template for more information
2
3 class Program
4 {
5     public static string aloo(string name)
6     {
7         string fullname = name;
8         return fullname;
9     }
10
11     static void Main(string[] args)
12     {
13         string my_name = aloo("Le Hoang Hai");
14         string sentence = "My full name is: " + my_name;
15         Console.WriteLine(sentence);
16     }
17 }
```

PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL

PS C:\Users\ASUS\Desktop\OBB\Csharp> cd "C:\Users\ASUS\Desktop\OBB\Csharp\" ; if (\$?) { dotnet run Program.cs }
My full name is: Le Hoang Hai
PS C:\Users\ASUS\Desktop\OBB\Csharp>

7. Using an example, describe the term **scope**.
- Scope can be seen as a concept that determines a variable which can be accessed or referenced outside a method.
8. In any procedural language you like, write a function called Average, which accepts an array of integers and returns the average of those integers.



```
1
2 # Online Python - IDE, Editor, Compiler, Interpreter
3
4 def Average(array):
5     array_total = sum(array);
6     array_int = len(array);
7     avg = array_total / array_int;
8     return avg;
9
10 numbers = [1,2,3,4];
11 average = Average(numbers);
12 print(average);
```

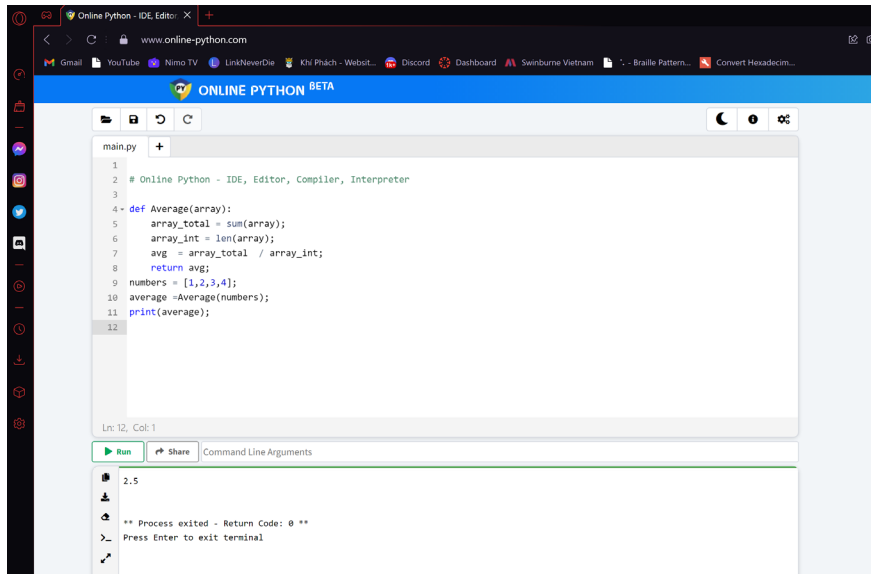
Ln: 12, Col: 1

Run Share Command Line Arguments

2.5

** Process exited - Return Code: 0 **
Press Enter to exit terminal

9. In the same language, write the code you would need to call that function and print out the result.



```
1
2 # Online Python - IDE, Editor, Compiler, Interpreter
3
4 def Average(array):
5     array_total = sum(array);
6     array_int = len(array);
7     avg = array_total / array_int;
8     return avg;
9 numbers = [1,2,3,4];
10 average =Average(numbers);
11 print(average);
12
```

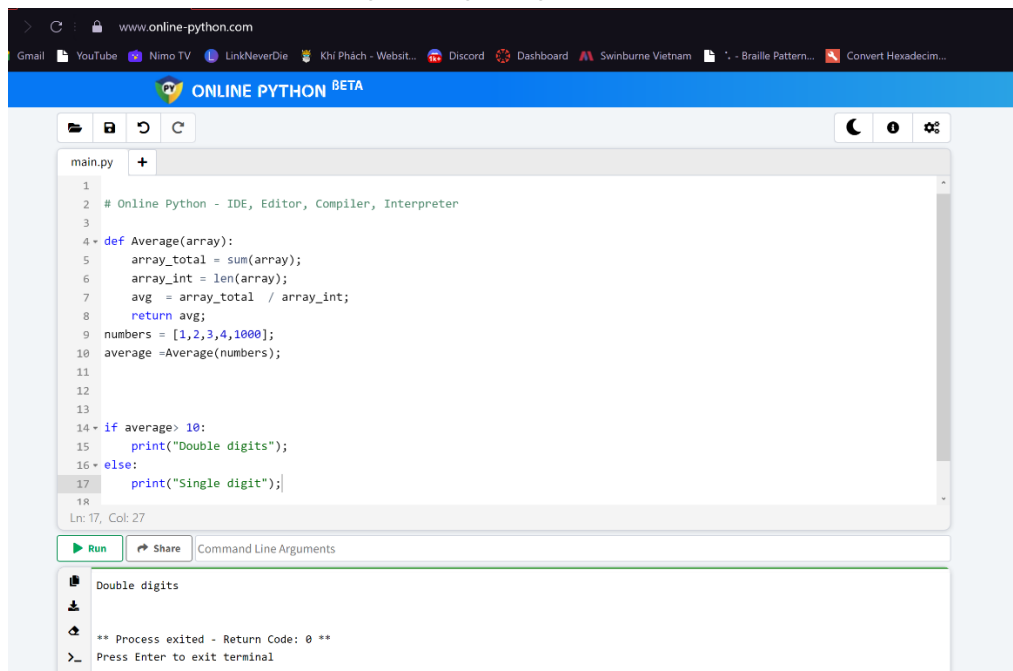
Ln: 12, Col: 1

Run Share Command Line Arguments

2.5

** Process exited - Return Code: 0 **
Press Enter to exit terminal

10. To the code from 6, add code to print the message “Double digits” if the average is above 10. Otherwise, print the message “Single digits”.



```
1
2 # Online Python - IDE, Editor, Compiler, Interpreter
3
4 def Average(array):
5     array_total = sum(array);
6     array_int = len(array);
7     avg = array_total / array_int;
8     return avg;
9 numbers = [1,2,3,4,1000];
10 average =Average(numbers);
11
12
13
14 if average > 10:
15     print("Double digits");
16 else:
17     print("Single digit");
18
```

Ln: 17, Col: 27

Run Share Command Line Arguments

Double digits

** Process exited - Return Code: 0 **
Press Enter to exit terminal