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WORKSHEET 1 – TESTING (Using Variables)

1. Original code:

```
# -----WORKSHEET 1-----

full_name = input("Please, enter your Full name:").lower()

while full_name == "":
    print("Not to be empty:")
    full_name = input("Please, enter your full name").lower()
    print("Welcome " + full_name)

nat_number = input("Please, enter your National Number:").lower()
age = int(input("Please, enter your Age:"))

while age < 18:
    print("Must be over 18!")
    age = int(input("Please, enter your Age:"))
    print("You have successfully signed up!")

hours_working = float(input("Please, enter your Hours:"))

print(" your details")
print("Full name:", full_name,)
print("Your age:", age)
print("National Insurance number:", nat_number)
print("Hours:", hours_working)
```

2. Code Testing

For each test below, run your code and enter the values provided. Present a screenshot of the programme running. Did the programme behave correctly or did it do something unexpected, and if so, why?

Surname:

- i. Enter *JONES*
- ii. Leave blank
- iii. Enter *A*
- iv. Enter *123*

National Insurance Number:

- i. Enter PE534121B
- ii. Leave blank
- iii. Enter AB11223344556677 (ie too long for National Insurance number format)
- iv. Enter 22PE4088A (ie wrong format)

Age

- i. Enter 34
- ii. Enter 150
- iii. Enter -4
- iv. Enter a letter

Number of working hours per week:

- i. Enter 37.5
- ii. Enter 150
- iii. Enter 0
- iv. Enter -2

Fill in a box for each test above. You should present 16 separate boxes, 1 for each test. (Note: the first two boxes are provided as a template)

SURNAME

Test:

Surname i. Enter JONES

Screenshot(s) of output:

```
C:\Users\aleks\PycharmProjects\PythonProject\.venv\Scripts\python.exe "C:\Users\aleks\PycharmProjects\PythonProject\Work_sheet\work_sheet 1.py"
Please, enter your Full name:JONES
Welcome jones
Please, enter your National Number:PF254545A
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:35.2
your detaillis
Full name: jones
Your age: 25
National Insurance number: pf254545a
Hours: 35.2

Process finished with exit code 0
```

Result: Did the programme behave as expected ie syntactically and logically correct?

YES, name was accepted by program with any issue.

Test:

Surname ii Leave blank

Screenshot(s) of output:

```
Please, enter your Full name:
Not to be empty:
Please, enter your full nameMarvin Valencia
Welcome marvin valencia
Please, enter your National Number:PF252525S
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:35.3
```

Result: Did the programme behave as expected ie syntactically and logically correct?

YES, the program does not accept leaving the field in blank and mut be inserted for the program to recognize that the field is blank.

Test:

Surname iii enter A

Screenshot(s) of output:

```
C:\Users\aleks\PycharmProjects\PythonProject\.venv\Scripts\python.exe
Please, enter your Full name:A
Welcome a
Please, enter your National Number:KF252525S
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:35.2
your detailis
Full name: a
Your age: 25
National Insurance number: kf252525s
Hours: 35.2
```

Result: Did the programme behave as expected ie syntactically and logically correct?
YES, the letter "A" was accepted as a name by program.

Test: Surname

iv enter number 1234

Screenshot(s) of output:

```
Please, enter your Full name:1234
Welcome 1234
Please, enter your National Number:FC252525S
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:32.2
```

Result: Did the programme behave as expected ie syntactically and logically correct?
YES, well the numerical input was accepted as a name by program but it is possible that there is tool that be allowed only words instead of numbrers.

National Insurance Number

Test: National Insurance Number

i enter PE534121B

Screenshot(s) of output:

```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:PE534121B
Please, enter your Age:25
You have successfully signed up!
```

Result: Did the programme behave as expected ie syntactically and logically correct?

YES, national insurance number was accept by program without any issue.

Test: National Insurance Number

ii leave blank

Screenshot(s) of output:

```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:35.2
```

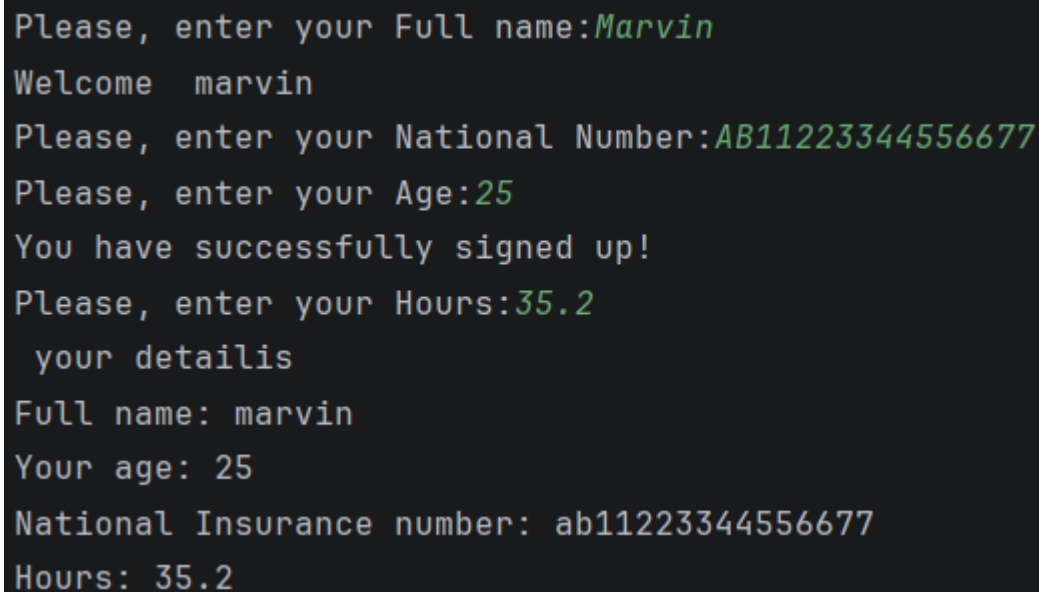
Result: Did the programme behave as expected ie syntactically and logically correct?

NO, there is not a variable into the code to recognize that field is blank. Then the program could not be noticed that the field was blank

Test: National Insurance Number

iii enter AB11223344556677

Screenshot(s) of output:



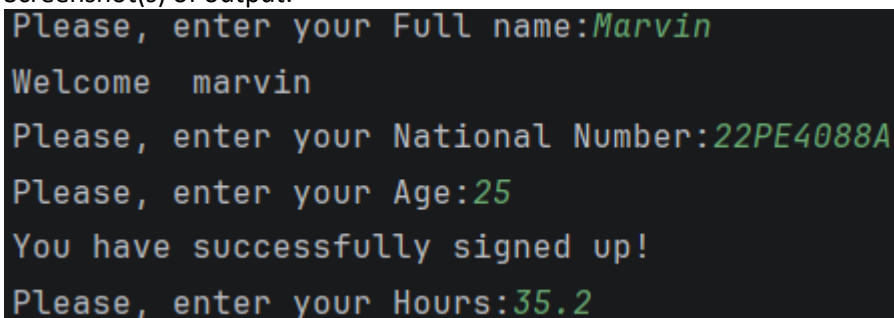
```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:AB11223344556677
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:35.2
your detailis
Full name: marvin
Your age: 25
National Insurance number: ab11223344556677
Hours: 35.2
```

Result: Did the programme behave as expected ie syntactically and logically correct?
yes, the long digit was accepted by program without any issue but that does not mean that it is correct. However, there was not variable into the code getting a limited of characters.

Test: National Insurance Number

i. Enter 22PE4088A (ie wrong format)

Screenshot(s) of output:



```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:22PE4088A
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:35.2
```

Result: Did the programme behave as expected ie syntactically and logically correct?
No. the program was authorised correctly because it has not been set with the parameters established in the variable.

Age

Test: Age

i. Enter 34

Screenshot(s) of output:

```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:PG252515C
Please, enter your Age:34
You have successfully signed up!
Please, enter your Hours:35.5
```

Result: Did the programme behave as expected ie syntactically and logically correct?

YES, age was accepted by program without issue.

Test: Age

i. Enter 150

Screenshot(s) of output:

```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:PD252525C
Please, enter your Age:150
You have successfully signed up!
Please, enter your Hours:35.2
```

Result: Did the programme behave as expected ie syntactically and logically correct?

NO, the age was accepted by the programme but does not have a limit set by any variable. It must be modified and a limit established.

Test: Age

- i. Enter -4

Screenshot(s) of output:

```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:PD25154D
Please, enter your Age:-4
Must be over 18!
Please, enter your Age:-4
Must be over 18!
Please, enter your Age:35
You have successfully signed up!
Please, enter your Hours:
```

Result: Did the programme behave as expected ie syntactically and logically correct?
YES, age was denied because the age must be over 18 but no less than this.

Test: Age

- i. Enter a letter

Screenshot(s) of output:

```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:DF25151F
Please, enter your Age:D
Traceback (most recent call last):
  File "C:\Users\aleks\PycharmProjects\PythonProject\Work_sheet\wor
    age = int(input("Please, enter your Age:"))
ValueError: invalid literal for int() with base 10: 'D'

Process finished with exit code 1
```

Result: Did the programme behave as expected ie syntactically and logically correct?
NO, the programme showed error because only allowed using a numerical character.

Hours Works

Test: Hours works

I. Enter 37.5

Screenshot(s) of output:

```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:DF656565F
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:37.5
your detailis
Full name: marvin
Your age: 25
National Insurance number: df656565f
Hours: 37.5

Process finished with exit code 0
|
```

Result: Did the programme behave as expected ie syntactically and logically correct?
YES. Hours work was accepted by programme with any issue.

Test: Hours works

ii. Enter 150

Screenshot(s) of output:

```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:PG25511D
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:150
your detailis
Full name: marvin
Your age: 25
National Insurance number: pg25511d
Hours: 150.0

Process finished with exit code 0
|
```

Result: Did the programme behave as expected ie syntactically and logically correct?

YES, the hours worked was accepted by programme even though there is no variable that sets a time limit.

Test: Hours works

I. Enter 0

Screenshot(s) of output:

```
Please, enter your Full name:Marvin
Welcome marvin
Please, enter your National Number:AS555555T
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:0
your detailis
Full name: marvin
Your age: 25
National Insurance number: as555555t
Hours: 0.0

Process finished with exit code 0
```

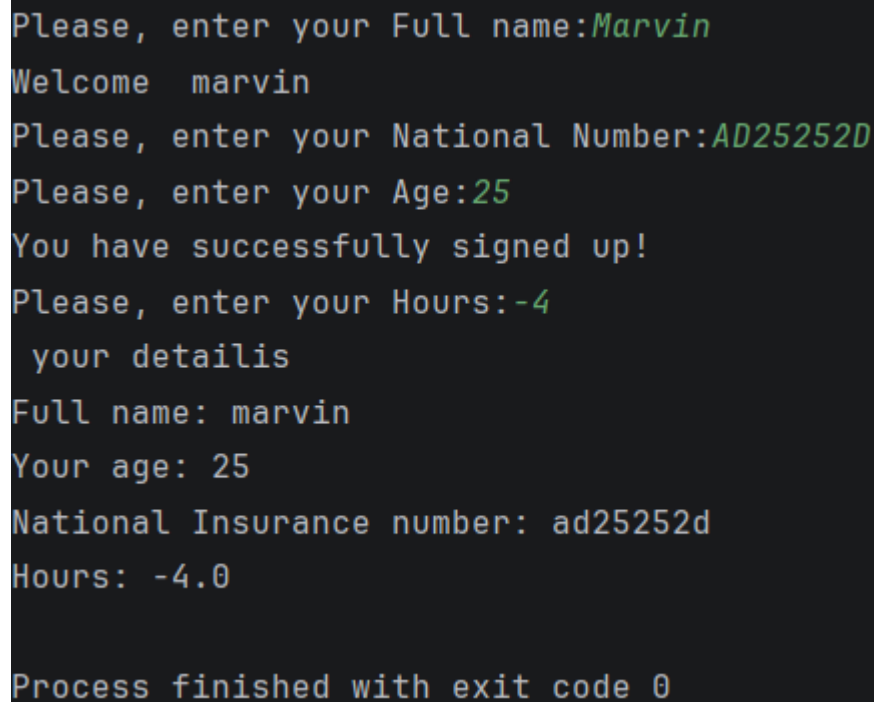
Result: Did the programme behave as expected ie syntactically and logically correct?

YES. The hours worked were accepted by the programme even though there is no variable that sets a time limit.

Test:

iv enter -4

Screenshot(s) of output:

A screenshot of a terminal window with a dark background and light green text. The text shows a sequence of prompts and user inputs for a sign-up process. The inputs are: 'Marvin' for the full name, 'AD25252D' for the national number, '25' for the age, and '-4' for the hours. The program outputs a welcome message, a success message, and then displays the entered details. The process ends with an exit code of 0.

```
Please, enter your Full name:Marvin
Welcome  marvin
Please, enter your National Number:AD25252D
Please, enter your Age:25
You have successfully signed up!
Please, enter your Hours:-4
  your detailis
Full name: marvin
Your age: 25
National Insurance number: ad25252d
Hours: -4.0

Process finished with exit code 0
```

Result: Did the programme behave as expected ie syntactically and logically correct?

No. The hours worked were accepted by the programme even though there is no variable that sets a time limit.

3. Consider the results of the above tests and revisit your code in order to solve the problems.
(Note: you may not be able to solve all of them, but solve as many as you can.)

Paste your revised code here:

```
# -----WORKSHEET 1-----

full_name = input("Please, enter your Full name:").lower()

while full_name == "":
    print("Not to be empty:")
    full_name = input("Please, enter your full name").lower()
print("Welcome ", full_name)

nat_number = input("Please, enter your National Number:").lower()
while len(nat_number) != 9:
    print("National number must be 9 digits")
    nat_number = input("Please, try again:").lower()
print("well done!")

age = int(input("Please, enter your Age:"))
while age < 18:
    print("Must be over 18!")
    age = int(input("Please, enter your Age:"))
print("You have successfully signed up!")

hours_working = float(input("Please, enter your Hours:"))

while hours_working <= 0 or hours_working >= 45 :
    print("Must be between 0 and 45!")
    hours_working = float(input("Please, enter your Hours:"))
print("thanks!")
```