

COMP101 – Assignment 04

Python Code –

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# 201358937 Tonge_Brandon-CA04.py
# November 2018
# This program will take a test mark as well as the days over
# the deadline. It will then print the final mark taking into
# consideration the penalty for the days late.

# Main Function
def main():

    # Main Menu
    print("\n---Main Menu---")
    print("A - Marking")
    print("E - Extend")
    print("X - Exit Program")
    print("")
    choice = str.upper(input("Please select an option from the menu: "))

    # TEST
    # print(choice)

    # Function Selection
    if(choice == "A"):
        marking()

    elif(choice == "E"):
        extended()

    elif(choice == "X"):
        exit()

    else:
        print("\nPlease enter a valid choice!\n")
        main()

# Marking Function
def marking():

    # User Inputs w/ Validation
    mark = int(input("\nPlease enter your original mark (0-100): "))
```

```
while (mark <0 or mark >100):
    print("\nEnter a valid input!")
    mark = int(input("\nPlease enter your original mark (0-100): "))

days_late = int(input("\nPlease enter the number of days late (0-12): "))

while (days_late <0 or days_late >12):
    print("\nEnter a valid input!")
    days_late = int(input("\nPlease enter the number of days late (0-12): "))

# Duplicate "days_late"
days_late1 = days_late

# Print Original Mark
print("\n-Mark- -Days Late-")
print(" ", mark, " -- ", 0)

# Mark Deduction Loop
while (days_late != 0 and mark >40):
    mark = mark - 5
    days_late = days_late - 1
    ll = days_late1 - days_late

    if (mark < 40):
        mark = 40

    print(" ", mark, " -- ", ll)

# Final print out
if (days_late > 0 and mark == 40):
    print("\nYour score has been capped at 40 due to being over the "
          "deadline date and not scoring enough to deduct anymore.")
    print(f"\nYour work was {days_late1} days late, giving it the overall mark
of {mark}")

else:
    print(f"\nYour work was {days_late1} days late, giving it the overall mark
of {mark}")

main()

# Extended Function
```

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```
def extended():
```

```
    print("\nExtended\n")  
    main()
```

```
# Program Start  
main()
```

Testing Table –

Inputs	Expected Outputs	Actual Outputs	Comments
Mark – 101 Days Late – 0	Error on the Mark input.	The mark input triggered my error message.	This is the output I expected and confirms the upper limit of my while loop is working. No correction is needed.
Mark – -1 Days Late – 0	Error on the Mark input.	The mark input triggered my error message.	This is the output that I expected and confirms that the lower limit of my while loop is working correctly. No correction is needed.
Mark – 100 Days late – 13	Error on the Days Late input.	The Days Late input triggered my error message.	This is the output I expected. The Mark input confirms that the less than or equals too statement is working and the error message on the Days Late input confirms that the upper limits of that while loop is also working correctly. No correction is needed.
Mark – 0 Days Late – -1	Error on the Days Late input.	The Days Late input triggered my error message.	This is the output I expected. The mark input confirms that the lower equals too or more than statement is working and the error message on the Days Late input confirms that the lower limit of that while loop is also working correctly. No correction needed.
Mark – 66 Days Late – 0	I expect the output mark of 66 and 0 days late. I also expect it to not trigger the final print out IF statement.	The output matched exactly as I expected.	This is the output I expected. The Days Late input confirmed that the less than or equals too statement is working and the overall output confirms that the final print statement is also working. It is also a good indication of the overall working of the code, but more examples are needed.

Mark – 57 Days Late – 12	I expect the output mark of 40 and 4 days late. This should be capped and also trigger the final print out statement noting the final score has been capped.	The output matched what I had expected.	This the output that I expected. The Days Late input confirms that the more than or equal too statement is working. The overall output also confirms that the mark deduction loop is working correctly as well as the final print out statement. No corrections are needed.
Mark – 83 Days Late – 5	I expect the output Mark to be 58 and the Days Late to be 5.	The output matched what I had expected.	This is the output I expected. The program outputted each day late with the appropriate mark next to it, stopping once 5 days late had been reached. No corrections are needed.

Pseudocode –

```
OUTPUT "Enter the mark:"
INPUT User answer
STORE The variable "mark"
WHILE The variable "mark" is not in the range
    OUTPUT "Error"
    OUTPUT "Enter the mark:"
    INPUT User answer
    STORE The variable "mark"
```

```
OUTPUT "Enter the days late:"
INPUT User answer
STORE The variable "days_late"
WHILE The variable "days_late" is not in the range
    OUTPUT "Error"
    OUTPUT "Enter the days late:"
    INPUT User answer
    STORE The variable "days_late"
```

```
WHILE "days_late" variable is not equal to 0 and "mark" variable is more than 40
    CALCULATE "mark" variable is equal to itself minus 5
    CALCULATE "days_late" variable is equal to itself minus 1
    OUTPUT "mark" variable and "days_late" variable
```

```
OUTPUT "Your work was "days_late" giving it the mark of "mark""
```

```
CALL Main fuction
```