format-of-activity-2-2

February 6, 2025

Activity No. and Title:

Course: CPE 103	Program: BSCpE
Course Title: Object Oriented Programming	**Date Performed:** 2/1/2025
Section: 1A	**Date Submitted:** 2/1/2025
Student Name: Ampong, J_kevin L.	**Instructor's Name:** Maam Sayo

Objective/s of the activity:

1. Implement literals and variables in a python program.

improve learning skills on different types of variables, conditions, and operations that are essentially for building complex software and programs. This activity should be a solid introduction on how to use different operations that are a solid foundation for solving a real-world problem. Not only does this improve your programming skills in Python, but it also helps with programming in general that will apply in real applications.

Intended Learning Outcome:

1. Write a simple program implementing literals and variables.
2. Use comments and identify keywords from identifiers created by users.

Discussion:

This task is focused on building a solid foundation primarily on automating the calculation on the grading input by using different types of operations and implementation on computation. Creating a right solution to this problem using the correct data types, such as float, int, and string, is important to get the right data. It is a necessary step for implementing the right solution; moreover, this is essential for the formula to have the correct data type in it and must be taken as a proper check before proceeding with the calculation.

Task

1. A teacher wants to calculate the final grade in a CpE course and want to write it in a python program. The following are the requirements:
2. PRELIM GRADE = 50% Prelim Exam + 50% Prelim Class Standing (CS)
3. PRELIM CS = 50% Hands-on activity + 30% Quiz + 20% Assignment
4. MIDTERM GRADE = 1/3 of PRELIM GRADE + 2/3 of (50% Midterm Exam + 50% Midterm Class Standing (CS))
5. MIDTERM CS = 50% Hands-on activity + 30% Quiz + 20% Assignment

6. FINAL GRADE = 1/3 of MIDTERM GRADE + 2/3 of (50% Final Exam + 50% Final Class Standing (CS))
7. FINAL CS = 50% Hands-on activity + 30% Quiz + 20% Assignment
8. HOAs, Quizzes and Assignments are inputted as average of all submissions and are out of 100%.
9. Major exams are inputted out of 100%.
10. Show the codes that successfully run the program.
11. Provide comments or documentation strings for your program.

Materials and Equipment:

1. Google Colab
2. Github
3. desktop Computer

Procedure:

```
1. Enter student name
2. Input Prelim grades (Exam, Activities, Quiz, Assignment)
3. System calculates Prelim grade
Input Midterm grades (Exam, Activities, Quiz, Assignment)
4. System calculates Midterm grade
Input Final grades (Exam, Activities, Quiz, Assignment)
5. System calculates Final grade
6. Display all grades and UCC equivalent
```

Supplementary Activity:

1. Test 3 students from the program you created.
2. The program should show the name of the student, the PRELIM, MIDTERM and FINAL grades.
3. Convert the final grade into the UCCs numerical grade. Please refer to the grading system.
4. Document your lab activity properly using Markdown codes.
5. Answer all the supplementary activities (programs and questions).
6. Write your conclusion.
7. Convert your notebook into a PDF file and submit the PDF to the link.

```
Enter student name: Ampong

Enter Prelim Exam grade: 100
Enter Hands-on Activity grade: 100
Enter Prelim Quiz grade: 100
Enter Prelim Assignment grade: 100

Enter Midterm Exam grade: 100
Enter Hands-on Activity grade: 100
Enter Midterm Quiz grade: 100
Enter Midterm Assignment grade: 100

Enter Final Exam grade: 100
Enter Hands-on Activity grade: 100
```

```
Enter Final Quiz grade: 100
Enter Final Assignment grade: 100

Student Name:  Ampong
Prelim Grade:  100.00
Midterm Grade:  100.00
Final Grade:  100.00
UCC Number System Grade:  1.00
====================
Enter student name: Justmine

Enter Prelim Exam grade: 90
Enter Hands-on Activity grade: 90
Enter Prelim Quiz grade: 90
Enter Prelim Assignment grade: 90

Enter Midterm Exam grade: 90
Enter Hands-on Activity grade: 90
Enter Midterm Quiz grade: 90
Enter Midterm Assignment grade: 90

Enter Final Exam grade: 90
Enter Hands-on Activity grade: 90
Enter Final Quiz grade: 90
Enter Final Assignment grade: 90

Student Name:  Justmine
Prelim Grade:  90.00
Midterm Grade:  90.00
Final Grade:  90.00
UCC Number System Grade:  1.75
====================
Enter student name: Jb

Enter Prelim Exam grade: 80
Enter Hands-on Activity grade: 80
Enter Prelim Quiz grade: 80
Enter Prelim Assignment grade: 80

Enter Midterm Exam grade: 80
Enter Hands-on Activity grade: 80
Enter Midterm Quiz grade: 80
Enter Midterm Assignment grade: 80

Enter Final Exam grade: 80
Enter Hands-on Activity grade: 80
Enter Final Quiz grade: 80
Enter Final Assignment grade: 80
```

```
Student Name:  Jb
Prelim Grade:  80.00
Midterm Grade:  80.00
Final Grade:  80.00
UCC Number System Grade:  2.75
====================
```

Questions: (write your answers in blue font color and questions in black)

1. Why is the Class Standing (CS) computed using 50% HOA, 30% Quiz, and 20% Assignment? These percentages show the importance of hands-on practice (50%) over quizzes (30%) and assignments (20%). Hands-on activities have the highest weight because they show actual skills.
2. How does the program calculate the Final Grade? Final Grade uses 1/3 of Midterm Grade plus 2/3 of the combined Final Exam and Final CS. This means your previous grade (Midterm) affects your Final Grade less than your current performance.

Conclusion: (conclusion must be based from the objective and answers whether you attained the objective/s or not and a brief explanation how you attained it)

[ ]:
```
PHOA = float(input("Enter Hands-on Activity grade: "))
PQUIZ = float(input("Enter Prelim Quiz grade: "))
PAS = float(input("Enter Prelim Assignment grade: "))
PCS = PHOA*.5 + PQUIZ*.3 + PAS*.2
print("Prelim CS is: ", PCS)
PEX = float(input("Enter Prelim Exam grade: "))
PG = PEX*.5 + PCS*.5
print("Prelim Grade is: ", "%.2f" % PG)
```

```
Enter Hands-on Activity grade: 54
Enter Prelim Quiz grade: 21
Enter Prelim Assignment grade: 40
Prelim CS is:  41.3
Enter Prelim Exam grade: 90
Prelim Grade is:  65.65
```

[ ]:
```
for i in range(3):
  #Student Information
  student_name = input("Enter student name: ")
  print()

  # Prelim Data Input
  PEX = float(input("Enter Prelim Exam grade: "))
  PHOA = float(input("Enter Hands-on Activity grade: "))
  PQUIZ = float(input("Enter Prelim Quiz grade: "))
  PAS = float(input("Enter Prelim Assignment grade: "))
  print()
```

```
#Calculate Prelim
PCS = PHOA*.5 + PQUIZ*.3 + PAS*.2
PG = PEX*.5 + PCS*.5

#Midterm Data Input
MEX = float(input("Enter Midterm Exam grade: "))
MHOA = float(input("Enter Hands-on Activity grade: "))
MQUIZ = float(input("Enter Midterm Quiz grade: "))
MAS = float(input("Enter Midterm Assignment grade: "))
print()

#Calculate Midterm
MCS = MHOA*.5 + MQUIZ*.3 + MAS*.2
MG = PG* 1/3 + 2/3* ((0.5* MEX + 0.5* MCS))

#Final Grade
FEX = float(input("Enter Final Exam grade: "))
FHOA = float(input("Enter Hands-on Activity grade: "))
FQUIZ = float(input("Enter Final Quiz grade: "))
FAS = float(input("Enter Final Assignment grade: "))
print()

#Calculate Final Grade
FCS = FHOA*.5 + FQUIZ*.3 + FAS*.2
FG = MG* 1/3 + 2/3* ((0.5* FEX + 0.5* FCS))

#Calculate GWA/GPA
print("Student Name: ", student_name)
print("Prelim Grade: ", "%.2f" % PG)
print("Midterm Grade: ", "%.2f" % MG)
print("Final Grade: ", "%.2f" % FG)

#Grading Conversion to UCC grading system
def UCC_grading_sytem(grade):
  if 99 <= grade <= 100:
    return 1.00
  elif 96 <= grade <= 98:
    return 1.25
  elif 93 <= grade <= 95:
    return 1.50
  elif 90 <= grade <= 92:
    return 1.75
  elif 87 <= grade <= 89:
    return 2.00
  elif 84 <= grade <= 86:
    return 2.25
  elif 81 <= grade <= 83:
```

```
      return 2.50
    elif 78 <= grade <= 80:
      return 2.75
    elif 75 <= grade <= 77:
      return 3.00
    else:
      return 5.00

  print("UCC Number System Grade: ", "%.2f" % UCC_grading_sytem(FG))
  print("=" * 20)
```

```
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Enter Hands-on Activity grade: 100
Enter Prelim Quiz grade: 100
Enter Prelim Assignment grade: 100

Enter Midterm Exam grade: 100
Enter Hands-on Activity grade: 100
Enter Midterm Quiz grade: 100
Enter Midterm Assignment grade: 100

Enter Final Exam grade: 100
Enter Hands-on Activity grade: 100
Enter Final Quiz grade: 100
Enter Final Assignment grade: 100

Student Name:  Ampong
Prelim Grade:  100.00
Midterm Grade:  100.00
Final Grade:  100.00
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Enter student name: Justmine

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Enter Hands-on Activity grade: 90
Enter Prelim Quiz grade: 90
Enter Prelim Assignment grade: 90

Enter Midterm Exam grade: 90
Enter Hands-on Activity grade: 90
Enter Midterm Quiz grade: 90
Enter Midterm Assignment grade: 90

Enter Final Exam grade: 90
```

```
Enter Hands-on Activity grade: 90
Enter Final Quiz grade: 90
Enter Final Assignment grade: 90

Student Name:  Justmine
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Enter Hands-on Activity grade: 80
Enter Midterm Quiz grade: 80
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Enter Final Exam grade: 80
Enter Hands-on Activity grade: 80
Enter Final Quiz grade: 80
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Student Name:  Jb
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