

OLLSCOIL NA hÉIREANN, CORCAIGH
THE NATIONAL UNIVERSITY OF IRELAND, CORK

COLÁISTE NA hOLLSSCOILE, CORCAIGH
UNIVERSITY COLLEGE, CORK

Examination Session and Year	Winter 2024
Module Code	CS1205
Module Title	Programming Fundamentals I
Paper Number	1
External Examiner	Daniela Petrelli
Head of School/ Department	Dirk Pesch
Internal Examiners	Rosane Minghim
Instructions to Candidates	The exam has three main question, each one with sub-questions. All sub-questions need to be answered. Attention: the last sub-question of question 3 is on page 3. Please highlight the question number that you are answering very clearly. In the questions where you must explain what a piece of code does, one short paragraph will suffice. Do not describe commands, just the purpose of the code.
Duration of Paper	1.5 hours
Special Requirements	Use of calculator is not allowed

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CS 1205 Programming Fundamentals I

Rosane Minghim

SEMESTER 1 2024/2025

Exam - 70 marks

1. (21 marks) For the code attached:

- (a) What does block 1 do?
- (b) What does block 2 do?
- (c) What does block 3 do?

2. (14 marks) Write the following Python code:

- (a) Create a function that takes as input a string and returns another string that contains *the first character of the input string* followed by *the last character of the input string*, followed by *the last two digits of your student number*.
- (b) Create a code in Python - it does not need to be a function - to read day, month and year of birth of a person and calculate and print how old that person is Today.

3. (35 marks) Given a Python program with the following code:

```
a = 2.34355
feel = 'love'
b = 32
c = 2.0
d = 8
L1 = [2,4,6,8,10,12]
```

What is printed if the code above is followed by the following commands:

- (a) `msg_1='They are {:.2f},{:s},and {:d}'
print(msg_1.format(a,feel,b))`
- (b) `print(b//2,b%3)`
- (c) `L1.pop(4)
L1.append(4)
print(L1)
print(L1.index(4))`
- (d) `print('+'+feel+'-'+feel)`

```
(e) print('%.2f'%a)
ACC = a - 2.34
print('%.2f'%ACC)
print('%.2f'%(ACC*100))
```

```
#Block 1 ****
```

```
N = int(input( ))  
T = float(input( ))  
S = 0  
C = 0  
while N>0:  
    S = S + N  
    N = N-T  
    C+=1  
print (' %d , %0.1f' % (C,S))
```

```
#Block 2 ****
```

```
def level(grade):  
    if grade<0 or grade >10:  
        return 0  
    if grade < 4:  
        return 4  
    elif grade < 6:  
        return 3  
    elif grade <= 8:  
        return 2  
    else:  
        return 1
```

```
print (level(0), level(-1), level (11), level(3), level(4), level(5), level(6), level(7), level(8), level(9),  
level(10))
```

#Block 3 *****

```
def what (arg):  
  
    if arg > 0:  
        if arg%6==0:  
            return True  
        else:  
            return False  
  
    else:  
        return False
```

```
print(what(12),what(8),what(0))
```

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