

Sample Practical Exam PAPER 2021



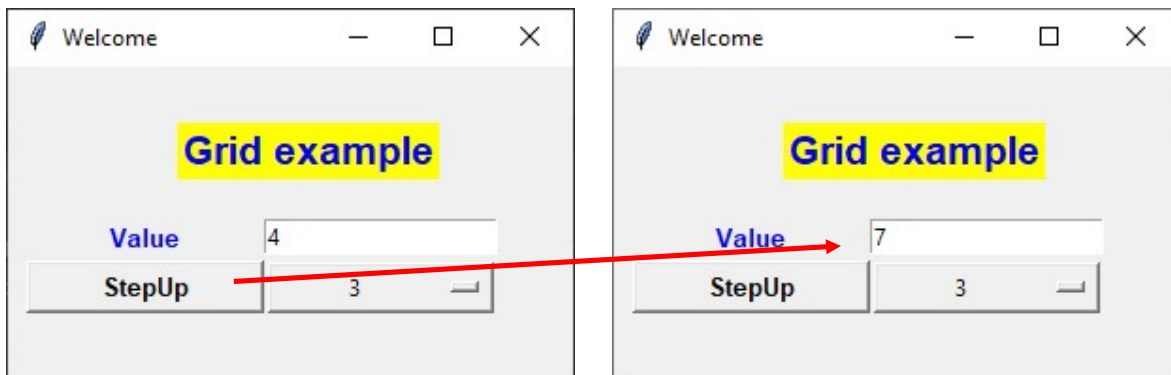
Instructions to candidates: Answer ALL Questions (1.5 hour)

BEng Software Engineering Software Development for Cloud 2 Sample Nov 2021

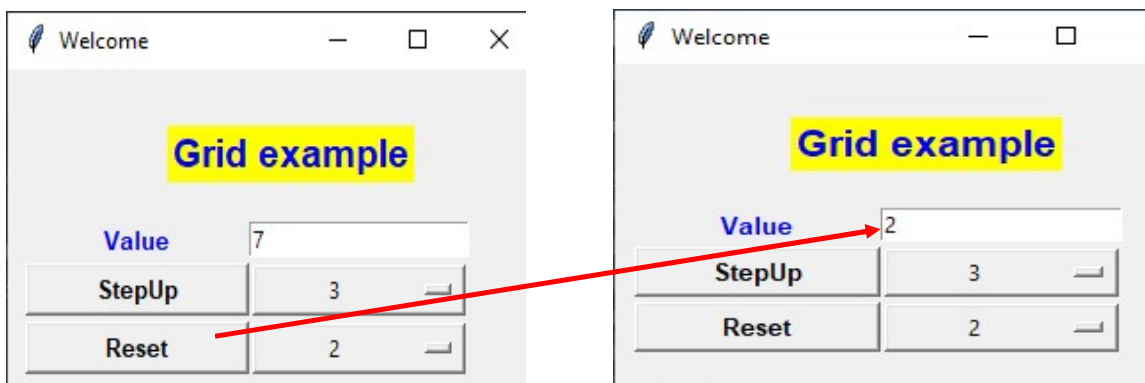
Do All 4 Questions, All 4 carry equal marks

All new or modified .java files must be zipped up and submitted to moodle as a single file

Q1. The following example allow the client to step up a value by a given amount as shown:



Now Modify the GUI application by adding a button & comBox to reset Value as shown



Q2. Complete the methods at the start of Q2_skel.py

`noneGreater(list, target)` returns true if no element of the list is greater than the target

`countLessThan(list,target)` returns the number of items in the list that is less than the target

The screenshot shows a window titled "List Functions" with a yellow header. Below the header, "Value1" is set to "[2, 6, 2, 7, 8, 4, 2, 6]" and "Target" is set to "5". At the bottom, the "noneGreater" button shows "False" and the "count < Target" button shows "4".

The screenshot shows the same "List Functions" window, but with "Target" set to "12". The "noneGreater" button now shows "True" and the "count < Target" button shows "8".

Q3. Complete the class Calculator

Welcome

Value1

Value2

Add

Mult

Result

Reset v1

Reset v2

Welcome

Value1

Value2

Add

Mult

Result

Reset v1

Reset v2

Calculator

```

-----
value1 (int)
value1 (int)
-----
__init__(int,int)
resetV1(int ) # resets value1 to a new value
resetV2(int ) # resets value2 to a new value
int getValue1() # returns value1
int getValue2()
int add() # return value1+value2
int mult() # return value1*value2

```

Q4. While Loop

Write a Program that will allow the user to Enter numbers (1-100) in a loop until 0 is entered and then print out the sum of the even numbers (See Notes Ch2)

Note: To check if a value is even use: `if (value %2==0):`

<pre>C:\Users\lorra\PycharmProjects\pytho Enter Value 1-100 (0 to stop):5 Enter Value 1-100 -0 to stop:6 Enter Value 1-100 -0 to stop:18 Enter Value 1-100 -0 to stop:1 Enter Value 1-100 -0 to stop:2 Enter Value 1-100 -0 to stop:0 Sum of Even Elements = 26</pre>	<pre>C:\Users\lorra\PycharmProjects\pytho Enter Value 1-100 (0 to stop):22 Enter Value 1-100 -0 to stop:3 Enter Value 1-100 -0 to stop:9 Enter Value 1-100 -0 to stop:18 Enter Value 1-100 -0 to stop:5 Enter Value 1-100 -0 to stop:0 Sum of Even Elements = 40</pre>
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