Programming in Python I, Intersession
Jacobs University Bremen
Dr. Kinga Lipskoch

Course: JTSK-350111
January 8th, 2018

Assignment 1 - Input, Output and Data Operations

- The problems of this assignment must be solved in Python.
- The TAs are grading solutions to the problems according to the following criteria: https://grader.eecs.jacobs-university.de/courses/350111/2017_2is/Grading-Criteria-Python.pdf

Problem 1.1 *Install Python* (0 points)

Install Python 3.6 or higher and IDLE using Python 3.6 or higher on your notebook.
Check www.python.org for details.

Problem 1.2 *Expressions I* (0 points)

Open IDLE, enter the following expressions using the interactive mode and observe the results:

a) `11`

b) `11 *3`

c) `2 **3`

d) `13 / 7`

e) `13 // 7`

f) `9 / 0`

Problem 1.3 *Simple output* (1 point)

Presence assignment, due by 12:30 h today
Write and save a program that prints your name and your major on the screen. Use two variables for your name and your major. Upload the `py` file using Grader.

Problem 1.4 *Expressions II* (1 point)

Presence assignment, due by 12:30 h today
Write and save a program that initializes two variables `a` and `b` with the values 19 and 3. Then your program should print corresponding messages and the following values on the screen:

a) `a`,

b) `b`,

c) `a + b`,

d) `a - b`,

e) `a * b`,

f) `a ** b`,

g) `a / b`,

h) `a // b`,

i) `a % b`.

Upload the `py` file using Grader.

Problem 1.5 *Simple input and output* (1 point)

Write a program that reads your name (as text/string) and your age (as number/integer value) as input from the keyboard.
This information should then be printed on the screen as a full sentence. The formulation of the sentence is up to you.
You can assume that the input will be valid.

Problem 1.6 *A rectangle* (1 point)

Write a program that reads from the keyboard the width and length of a rectangle as integer values. Compute the area of the corresponding rectangle and print the result as a meaningful sentence on the screen. The formulation of the sentence is up to you.
You can assume that the input will be valid.

Problem 1.7 *A circle* (1 point)

Write a program which reads the radius of a circle as input from the keyboard in the form of a floating point number and computes the area of the corresponding circle. You may assume that $\pi = 3.14159$ or use the constant `math.pi` after importing the `math` module by adding `import math` to the beginning of your program. Print the area of the circle on the screen.
You can assume that the input will be valid.

Problem 1.8 *Compute distance* (1 point)

Write a program which reads the velocity of riding a bike as input from the keyboards as well as an amount of time a person is biking. Your program should compute the distance the person can leave behind by riding the bike with the given velocity during the given amount of time. Print the resulting distance on the screen.
You can assume that the input will be valid.

How to submit your solutions

Name the programs a1_p*x*.py.
Each program **must** include a comment on the top like the following:

```
# 350111
# a1_p1.py
# Firstname Lastname
# myemail@jacobs-university.de
```

You have to submit your solutions via *Grader* at
`https://grader.eecs.jacobs-university.de`.

If there are problems (but only then) you can submit the programs by sending mail to
`k.lipskoch@jacobs-university.de` **with a subject line that starts with `JTSK-350111`**.

Please note, that after the deadline it will not be possible to submit solutions. It is useless to send solutions then by mail, because they will not be accepted.

Your code must run without any errors or warnings under python3.x.

This assignment is due by Saturday, January 13th, 10:00 h