UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Department of Computer Science
COS132 - Imperative Programming
Practical 2

1 Introduction

Deadline: 27th March, 20:00

1.1 Objectives and Outcomes

The objective of this practical is to introduce loops. At the end of this practical you should be able to implement not only loops but also nested loops.

1.2 Submission

You will have **10 submissions** where the total for the practical is **5 marks**. Submit your code to Fitchfork before the deadline. Students are **strongly advised** to submit well before the deadline as **no late submissions will be accepted**.

1.3 Plagiarism

Copying will not be tolerated in this course. For a formal definition of plagiarism, the student is referred to the COS132 Study guide. If you have questions regarding this, please ask one of the lecturers, to avoid any misunderstanding.

2 Practical Requirements

2.1 Loops

You are required to write a program that will use a loop structure to determine if a given number is a prime number.

The program should prompt the user to enter a number:

    Enter a number to check:

Once the number was inputted it should output one of the following statements, depending on if the number is prime or not:

```
    The number is prime.
    The number is not prime.
```

The user will then be given the option to execute the program again:

```
    Execute check again (yes/no):
```

A prime number can be divided, without a remainder, only by itself and by 1. Zero and 1 are not considered prime numbers.

Example of the required program:

```
    Enter a number to check: 61
    The number is prime.
    Execute check again (yes/no): yes
    Enter a number to check: 14
    The number is not prime.
    Execute check again (yes/no): yes
    Enter a number to check: 317
    The number is prime.
    Execute check again (yes/no): no
```

Hint: first get the basic program working correctly before worrying how to run it until the user opts out.

No libraries are allowed, using will result in a mark of 0. You need to pay special attention to spacing and new lines.