**Task 1**

For this task you need to access the programs **SeasonFinderBUGS.py** and **TaxCalculatorBUGS.py.** Both programs have errors in them.

1. **SeasonFinderBUGS.py** is a program that takes in the month of the year and outputs the season that month occurs in e.g., input → January, Output → Winter.

There are **five** errors in the code.

* What type of errors are these?
* Can you identify the errors and correct the code?

Syntax – missing quote mark

Syntax – p is capital should be lowercase for (print)

Syntax - M should be lower case

Syntax - only one lower case instead of 2

1. **TaxCalculatorBUGS.py** is a tax calculator program that will calculate how much tax is to be paid by an individual. The rules are:

* Salary is 30,000 or less, tax is 20% of salary
* Salary is over 30,000, tax is 20% for first 30,000 and 40% for anything over

Example of tax calculation:

|  |  |  |  |
| --- | --- | --- | --- |
| **Salary bracket** | **Tax rate** | **Example salary** | **Tax calculation** |
| <=30,000 | 20% | 25,000 | 25,000 \*20% = 5,000 |
| > 30,000 | 20% on first 30,000  40% for remaining | 100,000 | 30,000 x 20% = 6,000  70,000 x 40% = 28,000  total tax = 34,000 |

The program has **five** errors in it.

* What type of errors are these?
* Can you identify the errors and correct the code?

* Runtime Error = salary spelt incorrectly
* Runtime Error = salary spelt incorrectly
* Logic Error = There was an extra open bracket
* Logic Error = Missing indent on the line with beginning with tax =
* Logic Error = should say if salary < 30000