Introduction to Programming

Assignment 6

Create the dictionary with the below code and answer the question 1-8

```
ontario_cities = {
    "Toronto": {
        "population": 2731571,
        "area (sq km)": 630.21,
        "density (people/sq km)": 4334.4,
        "growth rate": 4.2,
        "world percentage": 0.035,
        "net change": 111779,
    },
    "Ottawa": {
        "population": 934243,
        "area (sq km)": 2790.33,
        "density (people/sq km)": 335.0,
        "growth rate": 5.3,
        "world percentage": 0.012,
        "net change": 47537,
    },
    "Mississauga": {
        "population": 721599,
        "area (sq km)": 292.43,
        "density (people/sq km)": 2468.3,
        "growth rate": 7.7,
        "world percentage": 0.009,
        "net change": 51876,
    },
    "Brampton": {
        "population": 593638,
        "area (sq km)": 266.71,
        "density (people/sq km)": 2226.3,
        "growth rate": 13.3,
        "world percentage": 0.008,
        "net change": 69392,
    },
    "Hamilton": {
        "population": 536917,
        "area (sq km)": 1138.11,
        "density (people/sq km)": 470.8,
        "growth rate": 4.0,
        "world percentage": 0.007,
        "net change": 20653,
    },
    "London": {
        "population": 403437,
        "area (sq km)": 420.57,
        "density (people/sq km)": 958.8
```

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```
        "growth rate": 4.8,
        "world percentage": 0.005,
        "net change": 18721,
    },
    "Markham": {
        "population": 328966,
        "area (sq km)": 212.02,
        "density (people/sq km)": 1551.3,
        "growth rate": 15.3,
        "world percentage": 0.004,
        "net change": 43488,
    },
    "Vaughan": {
        "population": 306233,
        "area (sq km)": 273.56,
        "density (people/sq km)": 1118.5,
        "growth rate": 13.9,
        "world percentage": 0.004,
        "net change": 37265,
    },
    "Kitchener": {
        "population": 270133,
        "area (sq km)": 136.89,
        "density (people/sq km)": 1970.0,
        "growth rate": 6.3,
        "world percentage": 0.004,
        "net change": 16044,
    },
    "Windsor": {
        "population": 217188,
        "area (sq km)": 146.37,
        "density (people/sq km)": 1484.4,
        "growth rate": 2.6,
        "world percentage": 0.003,
        "net change": 5491,
    },
}
```

Write Python code to solve the below questions,

1. Print the data type of variable `ontario_cities`. (3 Marks)
2. Print the length of the `ontario_cities`. (3 Marks)
3. Print the keys of `ontario_cities`. (3 Marks)
4. Print details of the city" Mississauga". (3 Marks)
5. Print all keys in subdirectories. (4 Marks)
6. Print the population of all cities. (4 Marks)
7. Print the city with the highest population. (5 Marks)
8. Find the city with the lowest density. (5 Marks)

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Note : Question Number must be added as comments, if not you will be graded 0 for the questionmissing question number

Submission:

- **You must submit one .py file answering all questions.**
- **Do your own work!** A mark of 0 will be assigned to the entire assignment for work that is not your own and will be handled as per the **Code of Student Rights and Responsibilities**
- **All work must be run and validated to ensure that it is free of errors**. Any assignment that is submitted showing errors that prevent it from running will receive a mark of 0**.**
- **Only apply the knowledge that we have learned in class to this point.** Answers using any syntax or knowledge that we have not covered yet will receive a mark of 0 for that question.
- **Any assignment submitted past the posted due date and time will receive a mark of 0**. Do not wait until the last minute to complete and submit your work.