

# IBM\_DataScience

March 11, 2024

## 1 IBM Tools for Data Science - Final Exam

### 1.1 Introduction

You will be provided with an empty Jupyterlite notebook which you will launch in the course, to complete this assignment. You will need to include a combination of markdown and code cells. You will likely need to use the Markdown cheat sheet to help you determine the appropriate syntax for your markdown.

### 1.2 Data Science Languages

### 1.3 Data Science Libraries

### 1.4 Data Science Tools

```
[8]: # some examples of arithmetic expr in python  
# First, define some numbers  
x = 1  
y = 2  
z = 3  
print(x, y, z)
```

1 2 3

```
[12]: # Then we can do some basic math on them  
a = x + z  
b = y + z  
c = y * z  
print(a, b, c)
```

4 5 6

```
[15]: # now we can make even more complex examples  
f = 3 * a + 2 * b + 3 * c  
g = (a * b * c) + (x + y + z)  
h = a ** x + b ** y + c ** z  
print(f, g, h)
```

40 126 245

```
[31]: # given a number of minutes, convert it to hours and print the string
```

```
def minutes_string(minutes):  
    print(f'{minutes}m is: ', end='')  
    hours = minutes // 60  
    min_remain = minutes % 60  
    ms = 'minute' if min_remain == 1 else 'minutes'  
    if hours == 0:  
        print(f'{min_remain} {ms}')    else:  
        hs = 'hour' if hours == 1 else 'hours'  
  
        if min_remain > 0:  
            print(f'{hours} {hs} and {min_remain} {ms}')        else:  
            print(f'{hours} {hs}')
```

```
[32]: # Several tests
```

```
minutes_string(0)  
minutes_string(1)  
minutes_string(15)  
minutes_string(60)  
minutes_string(61)  
minutes_string(75)  
minutes_string(120)  
minutes_string(121)  
minutes_string(135)
```

```
0m is: 0 minutes  
1m is: 1 minute  
15m is: 15 minutes  
60m is: 1 hour  
61m is: 1 hour and 1 minute  
75m is: 1 hour and 15 minutes  
120m is: 2 hours  
121m is: 2 hours and 1 minute  
135m is: 2 hours and 15 minutes
```

## 1.5 Exam Objectives

- ☒ Exercise 2 - Create a markdown cell with the title of the notebook. (1 pt)
- ☒ Exercise 3 - Create a markdown cell for an introduction. (1 pt)
- ☒ Exercise 4 - Create a markdown cell to list data science languages. (3 pts)
- ☒ Exercise 5 - Create a markdown cell to list data science libraries. (3 pts)
- ☒ Exercise 6 - Create a markdown cell with a table of Data Science tools. (3 pts)
- ☒ Exercise 7 - Create a markdown cell introducing arithmetic expression examples. (1 pt)
- ☒ Exercise 8 - Create a code cell to multiply and add numbers. (2 pts)
- ☒ Exercise 9 - Create a code cell to convert minutes to hours. (2 pts)
- ☒ Exercise 10 - Insert a markdown cell to list Objectives. (3 pts)

- ☒ Exercise 11 - Create a markdown cell to indicate the Author's name. (2 pts)
- ☒ Exercise 12 - Share your notebook through GitHub (3 pts)
- ☒ Exercise 13 - Take a screenshot of the first page of the notebook. (1 pt)

## **2 Author**

### **2.1 Enzo Ferber**