

UNIVERSITY OF WOLLONGONG

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School of Computing and Information Technology

Student to complete:

Family name	
Other names	
Student number	
Table number	

CSIT110 **Fundamental Programming with Python** **Wollongong Campus**

Examination Paper **Supplementary & Deferred Autumn 2018**

Exam duration	3 hours
Weighting	60%
Items permitted by examiner	None
Aids supplied	None
Directions to students	5 questions to be answered. Answer each question on a separate page.

This exam paper must not be removed from the exam venue

Total number of marks on this exam is 60.

Question 1. (10 points) Given the following code:

```
product_code = "377B"  
product_name = "Beef Liquid Stock"  
product_size = "250mL"  
product_price = 2.15
```

1) What is the output of the following statement?

```
print("product_code + product_name + product_size")
```

2) What is the output of the following statement?

```
print(product_code + " product_name " + product_size)
```

3) What is the output of the following statement?

```
print(product_code + ", " + product_name + ", + product_size")
```

4) What is the output of the following statement?

```
print(product_code + ", " + product_name + ", " + product_size)
```

5) Write one print statement using the above variables and **string format** so that it produces the following exact output:

```
377B: Beef Liquid Stock, 250mL
```

6) Write one print statement using the above variables and **string format** so that it produces the following exact output:

```
"Beef Liquid Stock", 250mL
```

7) Write one print statement using the above variables and **string format** so that it produces the following exact output:

```
Beef Liquid Stock, 250mL, $2.15
```

Question 2. (10 points) Write a program to do the following:

- First, ask the user how many fruits the user wants to select.
- Then ask the user to enter each fruit name.
- Finally, display all the fruits the user has selected.

The program should work as in the following example:

```
How many fruits would you like to select? 3  
Enter fruit name: banana  
Enter fruit name: apple  
Enter fruit name: grape
```

```
You have selected the following fruits: banana, apple, grape.
```

Question 3. This question has 2 parts:

1. **(10 points)** Write a function named **format_date**

- The function has **3 integer arguments**: date, month, and year;
- The function returns a **date string** in the format of DD-MM-YYYY

For example, if the argument date is 1, month is 2, year is 2000, then the function returns the string 01-02-2000; if the argument date is 10, month is 11, year is 2018, then the function returns the string 10-11-2018.

2. **(10 points)** Write a main program, that asks the user to enter a date, a month and a year, and then uses the above function to display the entered date in the format DD-MM-YYYY. The program should work as in the following example:

```
Enter date: 3
Enter month: 11
Enter year: 2001
```

```
You have entered: 03-11-2001
```

Question 4. (10 points) Consider the following Farmer Problem: "Farmer John had ducks and cows. One day he noticed that the animals had a total of 10 heads and 28 legs. How many of the animals were ducks and how many were cows?" The solution is 6 ducks and 4 cows.

Write a program to solve the Farmer Problem. The program asks the user to enter the number of animal heads and the number of legs. Then the program uses the **FOR LOOP** to search for a solution. If there is a solution, then the program displays the solution, otherwise, the program should display a message saying that there is no solution.

The program should work as in the following example:

```
Enter head count: 10
Enter leg count: 24
```

```
Solution found. duck: 8, cow: 2
```

Here is another example:

```
Enter head count: 10
Enter leg count: 23
```

```
No solution found.
```

Question 5. (10 points) Write a program that uses the **WHILE LOOP** that asks the user to enter a digit (zero-nine) in English word and then displays the entered digit word as a number. The program should run forever and the user has to enter q to quit the program. The program should work as follows:

```
Enter a digit word (zero-nine) or q to quit: five
You have entered: 5
Enter a digit word (zero-nine) or q to quit: zero
You have entered: 0
Enter a digit word (zero-nine) or q to quit: two
You have entered: 2
Enter a digit word (zero-nine) or q to quit: q
Good bye!
```

END OF EXAM