Problem 1.1: Name Printer

- Write a python program that asks the user for their first name and last name.
- Then the program prints how their name would appear on a Driver License (last name, then first name), and on a letter address (First name, then last name).

Example Program Run:

```
$ python3.11 program.py
Enter your first name: Aysa
Enter your last name: Erdnieva
On a Driver License your name would show as: Erdnieva Aysa
On a Letter your name would show as: Aysa Erdnieva
```

Problem 1.2: Simple Calculator

- Write a python program that asks the user for two numbers.
- The program then prints out three calculations for these two numbers.
    - The sum of these numbers, the difference, and the product.

Example Program Run:

```
$ python3.11 program.py
Enter first number: 2
Enter second number: 4
The sum of the numbers:6
The difference of the numbers: -2
The product of the numbers:8
```

Problem 1.3: Name Evaluator

- Write a python program that asks the user for their name.
- Then the program evaluates the name and prints the program's opinion about the name.
- If the name is "Aysa" the program prints "I think you are best girlfriend".
- If the name is "Anton" the program prints "I think you are the best boyfriend".
- In all other cases the program prints "I have no opinion about you"

Example Program Run:

```
$ python3.11 program.py
Enter your name name: Aysa
I think you are the best girlfriend
```

Example Program Run:

```
$ python3.11 program.py
Enter your name name: Anton
I think you are the best boyfriend
```

Example Program Run:

```
$ python3.11 program.py
Enter your name name: John
I have no opinion about you
```

Problem 1.4: Number guessing Game

- Write a python program that plays the number guessing game with the user.
- At the beginning the program will generate a random number between 1 and 10.
- Then it will allow the user to enter a maximum of two guesses.
- For each guess
    - if the guessed number is lower than the random number the program prints "The number is lower"
    - if the guessed number is higher than the random number the program prints "The number is higher"
    - if the guessed number is the same as the random number the program prints "You won. You guessed the correct number" and the program exits
- If both guesses are wrong, the program prints the lost game message, and the random number that the user was trying to guess
    - Example: "You lost the game. The random number is 5"

Example Program Run (the random number is 5):

```
$ python3.11 program.py
I know a random number between 1 and 10. You have 2 guesses to figure
out what it is.
Enter your first guess: 2
The number is higher
Enter your second guess: 8
The number is lower
You lost the game. The random number is 5
```

Example Program Run (the random number is 5):

```
$ python3.11 program.py
I know a random number between 1 and 10. You have 2 guesses to figure
out what it is.
Enter your first guess:8
The number is lower
Enter your second guess: 5
You won. You guessed the correct number
```

Example Program Run (the random number is 5):

```
$ python3.11 program.py
I know a random number between 1 and 10. You have 2 guesses to figure
out what it is.
```

```
Enter your first guess:5
You won. You guessed the correct number
```

Problem 1.5: Number Guessing with many tries

Update your number guessing game from above, and make the following changes

- Generate a random number between 1 and 1000
- Allow the user to enter how many guesses he wants to have
- Every time the user guesses a wrong number, give them a hint. If the guess is lower than the random number print "Wrong guess, the number is higher". If the guess is higher than the random number, print "wrong guess, the number is lower"
- At the end of the game print all the guesses the player has made (regardless if he won or lost).

Example Program Run

```
$ python3.11 program.py
I know a random number between 1 and 1000.
How many guesses do you want to make?: 4
Enter your guess: 500
The number is higher
Enter your guess: 750
The number is lower
Enter your guess: 700
The number is higher
Enter your guess: 710
The number is higher
You lost the game. The random number is 715
Here are all the guesses you made: 500, 750, 700, 710
```

Problem 1.6: Advanced Calculator

- Ask the user how many numbers they want to enter
- Let the user enter that many numbers
- Then make the following calculations for the full set of numbers that was entered
- Sum

- Avg
- Min - smallest number
- Max - biggest number
- Paired sums: add each pair of adjacent numbers together. if the amount of numbers is odd, then leave the last number as is.
    - Example 1:
        - Entered numbers: 2, 5, 7, 9
        - Paired sums: 7, 16
    - Example 2:
        - Entered numbers: 2, 5, 7, 9, 13
        - Paired sums: 7, 16, 13

```
$ python3.11 program.py
How many numbers do you want to enter: 4
Enter number: 2
Enter number: 5
Enter number: 7
Enter number: 9
Sum: 23
Average: 5.75
Min: 2
Max: 9
Paired Sums: 7, 16
```

Problem 1.7: Storage Unit Search

A storage unit business has reached out to you to build software to manage their storage units. Write a program that will help them document their inventory, and search it.
Your program will have 2 stages: let the owner enter their inventory, and then allow him to search it.

- Your program will first ask the owner how many storage units he has
- Then for each unit it will ask him what item is stored in that unit (a single word)
- Then it will ask him, how many searches he wants to perform
- Then for each search it will ask him to enter an item to search for
- If the item is located in one of the storage units, print the storage unit number, otherwise print "this item was not found"

Example run:

```
$ python3.11 storage.py
Hello, tell me how many storage units you have: 5
What item is stored in storage unit 1: lawnmower
What item is stored in storage unit 2: vase
What item is stored in storage unit 3: couch
What item is stored in storage unit 4: table
What item is stored in storage unit 5: tv
Done recording inventory. Now you can search your inventory
How many searches do you want to do: 3
What item do you want to search for ?: couch
"couch" is located in storage unit 3
What item do you want to search for ?: tv
"tv" is located in storage unit 5
What item do you want to search for ?: ladder
Did not find "ladder" in any of the storage units
Searching is complete. Goodbye
```