HW1

You do not need to consider exceptions that are not mentioned in this document.

You have to print exactly same as sample outputs.

1. Phone Book

1-1. constraints

- Always show prompt `CP-2017-12345>`(your student ID) before each task.
- In the initial state, when the user inputs empty line(just `\n`), it shows information about choices.
- In the initial state, when the user inputs `exit`, end the program.
- When each menu is finished, it returns to the initial state to wait another input of the user.

1-2. sample input

1-3. sample output

```
Phone Book
1. Add person
2. Remove person
3. Print phone book
```

---

2. Add person

2-1. constraints

- User can add person from the `Add person` menu.
- In the initial state, when the user inputs `1`, it enters the `Add person` menu and shows information about choices.
- Each person stores his/her first, last name and phone number.
- There must be a space between the first and last names.
- User inputs only `02-xxxx-xxxx` or `010-xxxx-xxxx` format as phone number.
- Person who is categorized in `Work` stores his/her team.
- Person who is categorized in `Family` stores his/her birthday.
- User inputs only `YYMMDD` format as birthday.
- Person who is categorized in `Friend` stores his/her age.
- After the task is done, print `Successfully added new person`.

2-2. sample input

```
1
```

2-3. sample output

```
Select Type
1. Person
2. Work
3. Family
4. Friend
```

---

3. Remove person

3-1. constraints

- User removes information of person from the `Remove person` menu.
- In the initial state, when the user inputs `2`, it enters the `Remove person` menu and asks index of person to remove.
- example of index policy
    - In the phone book with only one person, if user remove a person whose index is `0` and adds another person, the index of new person becomes `0`.

3-2. sample input

```
2
```

3-3. sample output

```
Enter Index of person:
```

3-4. sample input

```
10
```

3-5. sample output

- If the index is available

    ```
    A person is successfully deleted from the Phone Book!
    ```

- If not

    ```
    Person does not exist!
    ```

---

4. Print person

4-1. constraints

- User can print all the stored people and their information.
- In the initial state, when the user inputs `3`, it prints information of all persons.
- People who have been removed should not print.
- Output format is
    - `Person` class

      `{first name} {last name}_{phone number}`

    - `Work`, `Friend`

      `{first name} {last name}_{phone number}_{an addtional attribute}`

    - `Family`

      `{first name} {last name}_{phone number}_{birthday}_{D-day}`

4-2. sample input

```
3
```

4-3. sample output

```
Phone Book Print
1. John doe_010-1234-5678_Warriors
2. Stephen Curry_02-1234-5678_940101_261
.
.
```