Chapter 2 - How to write your first program

2.1 Student Registration

Create a program that allows a student to complete a registration form and displays a completion message that includes the user's full name and a temporary password.

Console:

```
Registration Form

First Name: Eric
Last Name: Idle
Birth Year: 1934

Welcome Eric Idle!
Your registration is complete!
Your temporary password is: Eric*1934
```

Specifications:

- The user's full name consists of the user's first name, a space, and the user's last name.
- The temporary password consists of the user's first name, an asterisk (*), and the user's birth year.
- Assume the user will enter valid data.

In [1]:
```
print("Registration Form\n")

first_Name=input(str("First Name:"))
last_Name=input(str("Last Name:"))
birth_Year=input(str("Birth Year:"))
print("\n")
print("Welcome " + first_Name + " " + last_Name+"!")
print("Your registration is complete!")
print("Your temporary password is: " + first_Name+"*"+birth_Year)
```

```
Registration Form


Welcome Austin Cousins!
Your registration is complete!
Your temporary password is: Austin*2005
```

2.2 - Pay Check Calculator

Create a program that calculates a user's weekly gross and take-home pay.

Console

```
Pay Check Calculator

Hours Worked: 35
Hourly Pay Rate: 14.50

Gross Pay: 507.5
Tax Rate: 18%
Tax Amount: 91.35
Take Home Pay: 416.15
```

Specifications:

- The formula for calculating gross pay is:

`gross pay = hours worked * hourly rate`

- The formula for calculating tax amount is:

`tax amount = gross pay * (tax rate / 100)`

- The formula for calculating take home pay is:

`take home pay = gross pay – tax amount`

- The tax rate should be 18%, but the program should store the tax rate in a variable so that you can easily change the tax rate later, just by changing the value that's stored in the variable.
- The program should accept decimal entries like 35.5 and 14.25.
- Assume the user will enter valid data.
- The program should round the results to a maximum of two decimal places.

In [90]:
```
print("Pay Check Calculator\n")

hours_worked = round(float(input("Hours Worked:")), 2)
hourly_rate = round(float(input("Hourly Pay Rate:")), 2)
print("\n")

tax_rate = 18
gross_pay = round(hours_worked * hourly_rate , 2)
tax_amount = round(gross_pay * ( tax_rate / 100) , 2)
take_home_pay = round(gross_pay - tax_amount , 2)

print(f"Gross Pay: {gross_pay}")
print(f"Tax Rate: {tax_rate}%")
print(f"Tax Amount: {tax_amount}")
print(f"Take Home Pay: {take_home_pay}")
```

```
Pay Check Calculator


Gross Pay: 507.5
Tax Rate: 18%
Tax Amount: 91.35
Take Home Pay: 416.15
```

2.3 - Travel Time Calculator

Create a program that calculates the estimated hours and minutes for a trip.

Console

```
Travel Time Calculator

Enter Miles: 200
Enter Miles per Hour: 65

Estimated Travel Time
Hours: 3
Minutes: 5
```

Specifications

- The program should only accept integer entries like 200 and 65.
- Assume that the user will enter valid data.

Hint

- Use integers with the integer division and modulus operators to get hours and minutes.

In [3]:
```
print("Travel Time Calculator\n")

num_miles = int(input("Enter Miles:"))
num_mph = int(input("Enter Miles Per Hour:"))
print("\n")
calculation_hours = num_miles // num_mph
calculation_minutes = (num_miles % num_mph)

print("Estimated Travel Time")
print(f"Hours: {calculation_hours}")
print(f"Minutes: {calculation_minutes}")
```

```
Travel Time Calculator


Estimated Travel Time
Hours: 3
Minutes: 5
```

In [ ]:
```

```