Write a Python program to create a Vehicle class with max_speed and mileage instance attributes.

```
class Vehicle:
    def __init__(self, max_speed, mileage):
        self.max_speed = max_speed
        self.mileage = mileage

# Example usage:
car = Vehicle(200, 30)
print("Car max speed:", car.max_speed)
print("Car mileage:", car.mileage)
```

```
Car max speed: 200
Car mileage: 30
```

Create a Vehicle class without any variables and methods

```
class Vehicle:
    pass
```

Write a Python program to create a class representing a Circle. Include methods to calculate its area and perimeter.

```
class Circle:
    def __init__(self, radius):
        self.radius = radius

    def area(self):
        return 3.14159 * self.radius**2  # Using pi as an approximation

    def perimeter(self):
        return 2 * 3.14159 * self.radius  # Using pi as an approximation

# Example usage:
circle = Circle(5)
print("Circle area:", circle.area())
print("Circle perimeter:", circle.perimeter())
```

```
Circle area: 78.53975
Circle perimeter: 31.4159
```

Write a Python program to create a person class. Include attributes like name, country and date of birth. Implement a method to determine the person's age.

```
from datetime import datetime

class Person:
    def __init__(self, name, country, dob):
        self.name = name
        self.country = country
        self.dob = dob

    def calculate_age(self):
        today = datetime.today()
        dob = datetime.strptime(self.dob, '%Y-%m-%d')
        age = today.year - dob.year - ((today.month, today.day) < (dob.month, dob.day))
        return age

# Example usage:
person = Person("John", "USA", "1990-05-15")
print("Name:", person.name)
print("Country:", person.country)
print("Date of Birth:", person.dob)
print("Age:", person.calculate_age())
```

```
Name: John
Country: USA
Date of Birth: 1990-05-15
Age: 33
```

Write a Python program to create a calculator class. Include methods for basic arithmetic operations. ChatGPT

```
class Calculator:
    def add(self, num1, num2):
        return num1 + num2

    def subtract(self, num1, num2):
        return num1 - num2

    def multiply(self, num1, num2):
        return num1 * num2

    def divide(self, num1, num2):
        if num2 == 0:
            return "Cannot divide by zero!"
        return num1 / num2

# Example usage:
calc = Calculator()
print("Addition:", calc.add(5, 3))
print("Subtraction:", calc.subtract(10, 4))
print("Multiplication:", calc.multiply(2, 6))
print("Division:", calc.divide(8, 2))
```

```
Addition: 8
Subtraction: 6
Multiplication: 12
Division: 4.0
```

Write a Python program to create a class that represents a shape. Include methods to calculate its area and perimeter. Implement subclasses for different shapes like circle, triangle, and square. ChatGPT

```
import math

class Shape:
    def area(self):
        pass

    def perimeter(self):
        pass

class Circle(Shape):
    def __init__(self, radius):
        self.radius = radius


Start coding or generate with AI.


    def perimeter(self):
        return 2 * math.pi * self.radius

class Triangle(Shape):
    def __init__(self, side1, side2, side3):
        self.side1 = side1
        self.side2 = side2
        self.side3 = side3

    def perimeter(self):
        return self.side1 + self.side2 + self.side3

    def area(self):
        s = (self.side1 + self.side2 + self.side3) / 2
        return math.sqrt(s * (s - self.side1) * (s - self.side2) * (s - self.side3))

class Square(Shape):
    def __init__(self, side):
        self.side = side

    def perimeter(self):
```