

Rectangle

- **length:** *double*
The length of one side of the rectangle
- **width:** *double*
The width of the other side of the rectangle
- + **Rectangle**(length: *double*, width: *double*)
Constructor that takes the length and width parameters
- + **setLength**(length: *double*): *void*
A method that sets the length of the rectangle to the specified value, ensuring it's positive
- + **setWidth**(width: *double*): *void*
A method that sets the width of the rectangle to the specified value, ensuring it's positive
- + **getArea**(): *double*
A method that calculates and returns the area of the rectangle
- + **getPerimeter**(): *double*
A method that calculates and returns the perimeter of the rectangle
- + **toString**(): *String*
A method that returns a string representation of the rectangle indicating its length and width

Car

- **model:** *String*
The model of the car
- **color:** *String*
The color of the car
- **speed:** *int*
The current speed of the car
- **isOn:** *boolean*
Whether the car is currently turned on or off
- **acceleration:** *int*
The rate at which the car accelerates
- + **Car**(model: *String*, color: *String*)
Constructor that takes the model and color parameters
- + **Car**(model: *String*, color: *String*, acceleration: *int*)
Constructor that takes the model, color, and acceleration parameters
- + **setAcceleration**(acceleration: *int*): *void*
A method that sets the acceleration of the car to the specified value
- + **start**(): *void*
A method that starts the car if it's not already running, accelerating it
- + **stop**(): *void*
A method that stops the car if it's running, setting its speed to zero
- + **accelerate**(): *void*

- A method that accelerates the car if it's running, increasing its speed by the acceleration rate
- + **accelerate**(acceleration: *int*): *void*
A method that sets the acceleration of the car to the specified value and then accelerates the car
 - + **toString**(): *String*
A method that returns a string representation of the car indicating its color, model, and current speed if it's running

Person

- **name**: *String*
The name of the person
- **car**: *Car*
The car associated with the person, indicating that a person can use a car
- **wallet**: *Wallet*
The wallet of the person, indicating aggregation where a person has a wallet, but both can exist separately
- **brain**: *Brain*
The brain of the person, indicating composition where a person has a brain, and both cannot exist separately
- + **Person**(name: *String*)
Constructor that takes the name parameter and initializes the brain
- + **Person**(name: *String*, car: *Car*, wallet: *Wallet*)
Constructor that takes the name, car, and wallet parameters and initializes the brain
- + **getName**(): *String*
A method that returns the name of the person
- + **think**(): *boolean*
A method that simulates the thinking process of the person, returns true if something is remembered
- + **drive**(): *void*
A method that simulates the process of driving where the person drives the associated car if available, accelerating if something is remembered during the thinking process
- + **buy**(item: *Item*): *void*
A method that simulates the process of buying an item where the person buys the item if they have a wallet, deducting the item's value from the wallet and simulating the thinking process

Wallet

- **color**: *String*
The color of the wallet
- **amount**: *int*
The amount of money in the wallet
- + **Wallet**(color: *String*)
Constructor that takes the color parameter

- + **Wallet**(color: *String*, amount: *int*)
Constructor that takes the color and amount parameters
- + **getColor(): String**
A method that returns the color of the wallet
- + **getAmount(): int**
A method that returns the amount of money in the wallet
- + **addMoney**(money: *int*): *void*
A method that adds the specified amount of money to the wallet if the amount is positive
- + **removeMoney**(value: *int*): *void*
A method that removes the specified amount of money from the wallet if there's enough money available, otherwise throws an *IllegalArgumentException*
- + **toString(): String**
A method that returns a string representation of the wallet in the format "Wallet[color]"

Brain

- **size: String**
The size of the brain
- **person: Person**
The person associated with the brain
- + **Brain**(person: *Person*)
Constructor that takes the person parameter and initializes the size to "medium"
- + **Brain**(person: *Person*, size: *String*)
Constructor that takes the person and size parameters
- + **getSize(): String**
A method that returns the size of the brain
- + **chance(): int**
A method that calculates the chance of remembering based on the size of the brain
- + **remember(): boolean**
A method that simulates the process of remembering by generating a random number and comparing it with the chance of remembering
- + **toString(): String**
A method that returns a string representation of the brain indicating the person's name and the size of the brain

Item

- **name: String**
The name of the item
- **value: int**
The value of the item
- + **Item**(name: *String*, value: *int*)
Constructor that takes the name and value parameters
- + **getName(): String**
A method that returns the name of the item

+ **getValue():** *int*

A method that returns the value of the item

+ **toString():** *String*

A method that returns a string representation of the item in the format "name (value)"