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PBO TEORI

**1. Smartphone**

* **State/Attributes:**

Brand

Model

Battery level

Screen brightness

Operating system

Storage capacity

Network connection (Wi-Fi, 4G/5G) o

Number of apps installed

**Behavior/Methods:**

Turn on/off

Make/receive calls

Send/receive messages

Open/close apps

Take pictures

Browse the internet

Adjust volume

Charge battery

1. **Laptop**
   * **State/Attributes:**

Brand

Model

Processor type

RAM size

Storage

Capacity

Battery level

Screen resolution

Operating system

* + **Behavior/Methods:**

Turn on/off

Open/close applications Connect to Wi-Fi Charge battery

Adjust brightness

Type using the keyboard Use the trackpad/mouse

Play videos/music

1. **Refrigerator**
   * **State/Attributes:**
   * Brand
   * Capacity
   * Temperature setting
   * Door status (open/closed)
   * Number of shelves
   * Light status (on/off)
   * Power consumption
   * **Behavior/Methods:**
   * Turn on/off
   * Adjust temperature
   * Open/close door
   * Turn light on/off
   * Start/stop cooling
   * Make ice o Defrost
2. **Car**
   * **State/Attributes:**
   * Make and model
   * Fuel level
   * Engine status (on/off)

Speed Odometer reading

Tire pressure

Number of doors

Color

* + **Behavior/Methods:**

Start/stop engine

Accelerate/decelerate

Turn left/right

Lock/unlock doors Open/close windows

Turn on headlights

Play music

1. **Microwave Oven**
   * **State/Attributes:**
   * Brand
   * Power level
   * Timer setting
   * Door status

(open/closed)

Capacity

Number of preset cooking modes

* + **Behavior/Methods:**
  + Turn on/off
  + Set cooking time
  + Adjust power level
  + Open/close door

Start/stop cooking

Defrost food

Reheat food

# Class Diagrams

Smartphone

|  |  |
| --- | --- |
| Attribute | Methods |
| brand: String | turnOn(): void |
| model: String | turnOff(): void |
| batteryLevel: int | makeCall(): void |
| screenBrightness: int | receiveCall(): void |
| operatingSystem: String | sendMessage(): void |
| storageCapacity: int | receiveMessage(): void |
| networkConnection: String | openApp(appName:  String): void |
| numberOfApps: int | closeApp(appName:  String): void |
|  | takePicture(): void |
|  | browseInternet(): void |
|  | adjustVolume(level: int):  void |
|  | chargeBattery(): void |

Laptop

|  |  |
| --- | --- |
| Attribute | Methods |
| brand: String | turnOn(): void |
| model: String | turnOff(): void |
| processorType: String | openApplication(appName:  String): void |
| ramSize: int | closeApplication(appName: String): void |
| storageCapacity: int | connectToWiFi(): void |
| batteryLevel: int | chargeBattery(): void |
| screenResolution: String | adjustBrightness(level: int):  void |
| operatingSystem: String | typeText(text: String): void |
|  | useTrackpad(): void |
|  | playVideo(videoName: String): void |
|  | playMusic(musicName:  String): void |

Refrigerator

|  |  |
| --- | --- |
| Attribute | Methods |
| brand: String | turnOn(): void |
| capacity: int | turnOff(): void |
| temperatureSetting:  int | adjustTemperature(temp:  int): void |
| doorStatus: boolean | openDoor(): void |
| numberOfShelves: int | closeDoor(): void |
| lightStatus: boolean | turnLightOn(): void |
| powerConsumption:  double | turnLightOff(): void |
|  | startCooling(): void |
|  | stopCooling(): void |
|  | makeIce(): void |
|  | defrost(): void |

Car

|  |  |
| --- | --- |
| Attribute | Methods |
| make: String | startEngine(): void |
| model: String | stopEngine(): void |
| fuelLevel: int | accelerate(amount: int):  void |
| engineStatus: boolean | decelerate(amount: int):  void |
| speed: int | turnLeft(): void |
| odometerReading: int | turnRight(): void |
| tirePressure: int | lockDoors(): void |
| numberOfDoors: int | unlockDoors(): void |
| color: String | openWindows(): void |
|  | closeWindows(): void |
|  | turnOnHeadlights(): void |
|  | playMusic(trackName: String): void |

MicrowaveOven

|  |  |
| --- | --- |
| Attrubute | Methods |
| brand: String | turnOn(): void |
| powerLevel: int | turnOff(): void |
| timerSetting: int | setCookingTime(time: int): void |
| doorStatus: boolean | adjustPowerLevel(level:  int): void |
| capacity: int | openDoor(): void |
| numberOfPresetModes: int | closeDoor(): void |
|  | startCooking(): void |
|  | stopCooking(): void |
|  | defrost(): void |
|  | reheat(): void |