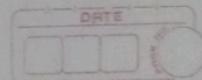


OOP - Assignment 0



Q.1 Create such 10 such object examples by following the structure above.

i] Object Name : Laptop

State ~~Attributes~~:

- Brand : Dell, HP, Asus
- Model: TUF, Victus,
- Color: silver, black, grey
- RAM: 8GB, 16GB
- Storage: 512GB, 1TB SSD
- Processor: i5, r5, r7
- Serial Number: HP1235

Behaviours:

- When I switch press the power button, the laptop turns on.
- When I press the shutdown, the laptop turns off.
- When I open application, It runs a program.
- When I type on keyboard, It inputs the data.
- When I touch the mouse/~~Keyboard~~, the cursor moves on screen.

Identity:

- serial number: HP1235

Responsibility:

- When powered on, the laptop should open quickly
- It should run applications without lag.
- It should take a input from a keyboard.

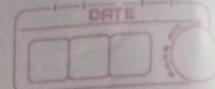
ii] Object name: Pen

state:

- Brand: Classmate, Reynolds
- Model: Octane, trimax
- ink color: Blue, Black
- Body color: Black, Blue
- Tip: 0.7

Behavior:

1. When I press the tip, the pen writes
2. When I stop writing, the pen stops leaving ink marks.
3. When I open the cap, the pen is ready to write.
4. When the ink ends, it should stop writing.
5. When I shake the pen lightly, ink may start flowing.



Identity: ~~consisting of 25 unique fields due to the system~~

serial number: Open 202512

Responsibility:

1. The pen should write smoothly without ink breaks
2. The tip should not leak ink

3) Object name: Mobile

State:

- Brand: Samsung Nivo
- Model: Galaxy M34, A16, T1
- Color: Blue, Black, Aqua, red, yellow.
- Ram: 8 GB
- Storage: 512 GB

Behavior:

- When I press the power button, the mobile turns On/Off.
- When someone calls, the mobile rings.
- When I plug the charger, the battery starts charging.
- When I tap an app icon, the mobile opens app.
- When I answer a call, the mobile connects the conversation.

Identity:

serial number: MOB28263

Responsibility:

- The mobile should start quickly, when powered on.
- It should show battery level correctly.
- It should respond accurately to touch input.

4) object name: student

state:

- name
- roll number
- age
- course
- gender
- marks



behaviour:

- i) When the student attends class, attendance increases.
- ii) When the student writes exam, marks recorded.
- iii) When the student studies, knowledge increases.
- iv) When the student submits assignment, it gets evaluated.
- v) When the student plays sport, improves physical.

identity:

Roll number: 1

Responsibility:

- 1) The student should attend class regularly.
- 2) The student should prepare for exams.
- 3) The student should complete assignments on time.

5) Object Name: Vehicle

State:

- type: car

- brand

- model

- colour

- fuel type

Behaviour

- i) When I turn the key, the vehicle should ignite.
- ii) When I press a brake, the vehicle should decrease speed.
- iii) When I blow or press a horn, the vehicle should blow.
- iv) When I shift gears, the vehicle should adjust power & speed.
- v) When I turn on headlights, the light gets on.

Identity:

Chassis No., Engine No.

Responsibility:

- It should accelerate & decelerate.
- It should respond properly to steering control.

6) Object name: Animal

State:

- Species
- Name
- age
- color
- weight

Behaviour:

- * - when the animal is hungry, it eats food.
- when the animal is tired, it sleeps.
- When the animal feels unsafe, it reacts.
- when it is trained, it follows commands.
- when the animal is happy, it plays.

Identity:

ID number: ANM202310

Responsibility:

1. The animal should maintain its health.
2. It should adapt to its environment for survival.
3. It should grow & develop according to its species.

1) Object name: Institute.

State:

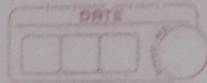
- name
- Type
- location
- Institute code
- Establishment

Identity:

Institute code: ENG6829

Behaviour:

- when a student applies, the institute processes admission.
- when a class are scheduled, the institute conduct lectures.
- when events are organised, the institute hosts activities.



8) Object name: industry

State:

- name
- type
- location
- establishment
- employee count
- industry id: IND0012

Behaviour:

- When raw materials are received, the industry starts production.
- When machine operates, product are manufactured.
- When quality checks are performed, defective work shifts are removed.
- When emp shift changes, production continues.
- When maintenance is scheduled, machines are serviced.

Identity:

- industry id.

Responsibility:

- 1) The industry should produce goods efficiently & safely.
- 2) It should maintain product quality standards.

9) Object Name: Bank

State:

- Name
- Branch
- IFSC code
- Bank ID
- No. of customers

Behaviours:

- When a customer deposit money, the bank increases account balance.
- When a cust withdraw money, the bank decrease account balance.
- When a loan is required, the bank verifies.

Identity:

C - IFSC code.

Responsibility:

- the bank should keep customer money safe.
- it should process transaction accurately.
- it should provide secure online banking services.

10) Object name : Hospital

State :

vi) hid

- i) Name
- ii) Location
- iii) No. of doctor
- iv) Department
- v) Ambulance available.

Behaviours

- i) When a patient arrives, the hospital register patient.
- ii) When a doctor examines, treatment is prescribed.
- iii) When tests are required, the hospital conduct lab test.
- iv) When surgery is scheduled, the OR is used.
- v) When a patient is discharged, medical record is updated.

Identity:

hid : 123xx

Responsibility:

The hospital should provide proper medical plans.

- It should maintain accurate patient record.