Final Project: Design

Part 1

Video

* Attributes
  + \_title: string
  + \_author: string
  + \_length: int
  + \_comments: List<string>
* Behaviors
  + Video (title: string, author: string, length: int, comments: List<string>)
  + Display(): void – Print the information on the video
  + DisplayComments(): void – Iterate through the Comment list, calling the display function for each element

Comment

* Attributes
  + \_author: string
  + \_content: string
* Behaviors
  + Comment (author: string, content: string)
  + Display(): Void – Print the information on the comment

Part 2

Order

* Attributes
  + \_customer: Customer
  + \_products: List<Product>
* Behaviors
  + Order (customer: Customer, products: List<Product>)
  + TotalCost(): float – Returns the total price of the order as a float
  + PackingLabel(): string – Returns the information as a Packing label
  + ShippingLabel(): string – Returns the information as a shipping label

Product

* Attributes
  + \_name: string
  + \_productID: string
  + \_pricePerUnit: float
  + \_quantity: int
* Behaviors
  + Product (name: string, productid: string, pricePerUnit: float, quantity: int)
  + Price(): float – returns the price of the product based on the price per unit and the quantity

Customer

* Attributes
  + \_name: string
  + \_address: Address
* Behaviors
  + Customer (name: string, address: Address)
  + IsUSA(): bool – Determines if the customer lives in the USA

Address

* Attributes
  + \_street: string
  + \_city: string
  + \_stateProvince: string
  + \_country: string
* Behaviors
  + Address (street: string, city: string, stateProvince: string, country: string)
  + InUSA(): bool – Determines if the address is in the USA
  + ReturnAddress(): string – Returns the address as a string

Part 3

Event

* Attributes
  + \_title: string
  + \_description: string
  + \_date: string
  + \_time: string
  + \_address: string
* Behaviors
  + Event (title: string, description: string, data: string, time: string, address: string)
  + StandardDetail(): string – Returns standard event details
  + FullDetails(): string – Returns full event details
  + ShortDescriptiio(): string – Returns a brief description of the event

Lecture

* Attributes
  + \_speaker: string
  + \_capacity: int
* Behaviors
  + Lecture (title: string, description: string, data: string, time: string, address: string, speaker: string, capacity: int)

Reception

* Attributes
  + \_rsvp: bool
* Behaviors
  + Reception (title: string, description: string, data: string, time: string, address: string)

OutdoorGathering

* Attributes
  + \_weather: string
* Behaviors
  + OutdoorGathering (title: string, description: string, data: string, time: string, address: string, weather: string)

Part 4

Activity [Abstract]

* Attributes
  + \_time: int
  + \_date: string
* Behaviors
  + Activity (time: int, date: string)
  + GetDistance(): float – Returns the distance as a float. Each child class will employ a different method.
  + GetSpeed(): float – Returns the speed as a float. Each child class will employ a different method.
  + GetPace(): float – Returns the pace as a float. Each child class will employ a different method.
  + GetSummary(): string – Returns the summary of the activity.

Running

* Attributes
  + \_distance: float
* Behaviors
  + Running (time: int, date: string, distance: float)
  + GetDistance(): float
  + GetSpeed(): float
  + GetPace(): float
  + GetSummary(): string

Cycling

* Attributes
  + \_speed: float
* Behaviors
  + Activity (time: int, date: string, speed: float)
  + GetDistance(): float
  + GetSpeed(): float
  + GetPace(): float
  + GetSummary(): string

Swimming

* Attributes
  + \_laps: int
* Behaviors
  + Activity (time: int, date: string, laps: int)
  + GetDistance(): float
  + GetSpeed(): float
  + GetPace(): float
  + GetSummary(): string