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IT 206 – 001 Assignment 9

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1)

OrderingSystem – implementation class – This class contains the user interface for entering orders and all information for each order.

Orders – Abstract Class – abstract ddc for orders with information used in all orders

Customer – ddc for customer information which is stored in the orders class

StatusUpdate – ddc for status updates for orders which is stored in the internet orders

Mail – ddc for mail orders – inherit from Orders class

Internet – ddc for internet orders – inherit from Orders class

Phone – ddc for phone orders – inherit from Orders class

2)

DDC

Orders – Abstract – DDC

|  |  |
| --- | --- |
| Constants |  |
| (+) Max\_NUM\_ORDERS: int | Max number of orders |
| (+) ORDER\_ID\_START: int | Order Id starting number |
| (+) VALID\_HANDLING\_INSTRUCTION: String[] |  |
|  |  |
| Variables |  |
| (-) orderCount: int | Counter for number of orders |
| (-) orderNumber: int | Order id |
| (-) customerInfo: Customer | Customers information |
| (-) handlingInstruction: String | Handling instructions |
|  |  |
| Constructor |  |
| (+) Orders(Customer customerInfo, String handlingInstruction) | Constructor for Orders |
|  |  |
| Accessor |  |
| (+) getOrderCount(): int | Returns order count |
| (+) getOrderNumber(): int | Return order number |
| (+) getName(): String | Return customer’s name |
| (+) getPhoneNumber(): String | Return customer’s phone number |
| (+) getCompanyName(): String | Return company name |
| (+) getHandlingInstruction(): String | Returns handling instruction |
|  |  |
| Mutator |  |
| (+) setCustomer(Customer custormerInfo): void | Sets customer information |
| (+) setName(String name): Boolean | Sets name |
| (+) setPhoneNumber(String phoneNumber): Boolean | Sets phone number |
| (+) setCompanyName(String companyName): Boolean | Sets company name |
| (+) setHandlingInstruction(String handlingInstruction): Boolean | Sets handling instruction |
|  |  |
| Validator |  |
| (+) validateHandlingInstruction(String handlingInstruction: boolean | Validate handling instruction |
|  |  |
| Special purpose method |  |
| (+) toString(): String | Returns a summary of the string |

Customer – DDC – Composition relationship with Orders

|  |  |
| --- | --- |
| Variables |  |
| (-) name: String | Name |
| (-) phoneNumber: String | Phone number |
| (-) company: Boolean | If there is a company name |
| (-) companyName: String | Company name |
|  |  |
| Constructor |  |
| (+) Customer(String name, String phoneNumber) | Constructor for customer without company name |
| (+) Customer(String name, String phoneNumber, boolean company, String companyName) | Constructor for customer with company name |
|  |  |
| Accessor |  |
| (+) getName(): String | Returns name |
| (+) getPhoneNumber(): String | Returns phone number |
| (+) getCompanyName(): String | Return company name |
|  |  |
| Mutator |  |
| (+) setName(String name): Boolean | Sets name |
| (+) setPhoneNumber(String phoneNumber): Boolean | Sets phone number |
| (+) setCompanyName(String companyName): Boolean | Sets company name |
|  |  |
| Validator |  |
| (+) validateString(String str): Boolean | Validate strings |
| (+) validatePhoneNumber(String phoneNumber): Boolean | Validate phone number |
|  |  |
| Special Purpose method |  |
| (+) toString(): String | Returns a summary of customer |

StatusUpdate – DDC – composition relationship with Internet

|  |  |
| --- | --- |
| Constant |  |
| (+) VALID\_STATUS: String[] | List of valid status |
|  |  |
| Variables |  |
| (-) employeeName: String | Employee’s name |
| (-) status: String | Status |
|  |  |
| Constructor |  |
| (+) StatusUpdate(String employeeName, String status) | Constructor for status update |
|  |  |
| Accessor |  |
| (+) getEmployeeName(): String | Returns employee name |
| (+) getStatus(): String | Returns status |
|  |  |
| Mutator |  |
| (+) setEmployeeName(String name): Boolean | Sets employee name |
| (+) setStatus(String status): Boolean | Sets status |
|  |  |
| Validator |  |
| (+) validateEmployeeName(String employeeName): Boolean | Validate employee name |
| (+) validateStatus(String status): Boolean | Validate status |
|  |  |
| Special purpose method |  |
| (+) toString(): String | Returns a summary of statusUpdate |

Mail – DDC – Inherits from Orders

|  |  |
| --- | --- |
| Constructor |  |
| (+) Mail(Customer customerInfo, String handlingInstruction) | Constructor for Mail |
|  |  |
| Special Purpose Method |  |
| (+) toString(): String | Returns a summary of mail |

Internet – DDC – Inherits from Orders

|  |  |
| --- | --- |
| Constant |  |
| (+) MAX\_NUM\_STATUS\_UPDATES: int | Max number of status update |
| (+) MIN\_NUMERIC\_CODE: int | Min numeric Code |
| (+) MAX\_NUMERIC\_CODE: int | Max numeric code |
| (+) MIN\_PASSWORD\_LENGTH: int | Min password length |
|  |  |
| Variables |  |
| (-) password: String | Password |
| (-) email: String | Email |
| (-) stat: StatusUpdate[] | Status update array |
| (-) statusCount: int | Number of status updates |
| (-) code: Boolean | If there is a numeric code |
| (-) numericCode: int | Numeric code |
|  |  |
| Constructor |  |
| (+) Internet(Customer customerInfo, String handlingInstruction, String password, String email, StatusUpdate[] stat, int statusCount) | Constructor for internet with numeric code |
| (+) Internet(Customer customerInfo, String handlingInstruction, String password, String email, StatusUpdate[] stat, int statusCount, boolean code, int numericCode) | Constructor for internet without numeric code |
|  |  |
| Accessor |  |
| (+) getPassword(): String | Returns password |
| (+) getEmail(): String | Returns email |
| (+) getStatusUpdate(): StatusUpdate[] | Returns status update |
| (+) getStatusList(): String | Returns a list of status updates |
| (+) getNumericCode(): int | Returns numeric code |
|  |  |
| Mutator |  |
| (+) setPassword(String password): Boolean | Sets password |
| (+) setEmail(String email): Boolean | Sets email |
| (+) setStatus(StatusUpdate[] stat, int, statusCount): void | Sets statusUpdates |
| (+) setNumericCode(Boolean code, int numericCode): boolean | Sets numeric code |
| (+) setNumericCode(Boolean code): Boolean | Sets numeric code |
|  |  |
| Validator |  |
| (+) validatePassword(String password): Boolean | Validate password |
| (+) validateEmail(String email): Boolean | Validate email |
| (+) validateStatus(String status): Boolean | Validate status |
| Special purpose method |  |
| (+) toString(): String | Returns a summary of Internet |

Phone – DDC – Inherits from Orders

|  |  |
| --- | --- |
| Constants |  |
| (+) CALL\_TIME: object[] | Valid call time objects |
| (+) CALL\_TIME\_STR: String[] | Valid call time strings |
|  |  |
| Variables |  |
| (-) callbackNumber: String | Call back number |
| (-) callbackTime: String | Call back time |
|  |  |
| Constructor |  |
| (+) Phone(Customer customerInfo, String handlingInstruction, String callbackNumber, String callbackTime) | Constructor for phone |
|  |  |
| Accessor |  |
| (+) getCallbackNumber(): String | Returns call back number |
| (+) getCallbackTime(): String | Returns call back time |
|  |  |
| Mutator |  |
| (+) setCallbackNumber(String phoneNumber): boolean | Sets call back number |
| (+) setCallbackTime(String callbackTime): void | Sets call back time |
|  |  |
| Validator |  |
| (+) validatePhoneNumber(String phoneNumber): boolean | Validates phone number |
|  |  |
| Special purpose method |  |
| (+) toString: String | Returns a summary of phone |

3)

Method: Main  
Purpose: The user interface with a menu option for the user  
Input: int-menuOption  
Returns: void

Method: getMenuOption  
Purpose: Get user input for menu option  
Input: void  
Returns: int - menuOption

Method: addOrder  
Purpose: Get user input for order information and stores the information  
Input: Orders[] – order, int- orderCount  
Returns: void

Method: getCustomer  
Purpose: get userInput for customer information  
Input: void  
Returns: Customer - customerInfo

Method: getInt  
Purpose: get user input for integer  
Input: String – message, String – error, int-min, int-max  
Returns: int - num

Method: getPhoneNumber  
Purpose: get user input for phone number  
Input: String – message, String error  
Returns: String phoneNumber

Method: getString  
Purpose: Get user input for a String  
Input: String – message, String error  
Returns: String - userInput

Method: getPassword  
Purpose: Get user input for a password  
Input: String – message, String error  
Returns: String - password

Method: getEmail  
Purpose: get user input for an email  
Input: String – message, String error  
Returns: String email

Method: printSummery  
Purpose: print out a summery of the information  
Input: Orders[] order, int orderCount  
Returns: void