**CODE MARATHON Q1**

**BILLING SYSTEM**

Implement class Customer with following description.

|  |  |
| --- | --- |
| ***Data Member*** | ***Data Type*** |
| customername | character pointer |

Implement the below listed functions.

|  |  |
| --- | --- |
| ***Method*** | ***Description*** |
| default constructor | To assign default values |
| parameterized constructor | To set values of parameters |
| Copy constructor | To Copy one Customer object into another |
| Get and set functions | Getter and setter for all attributes |
| accept() | Accept details from user |
| operator<< | To display details |
| Destructor | To free memory |

Implement class Date with following description.

|  |  |
| --- | --- |
| ***Data Member*** | ***Data Type*** |
| day | int |
| month | int |
| year | int |

Implement the below listed functions.

|  |  |
| --- | --- |
| ***Method*** | ***Description*** |
| default constructor | To assign default values |
| parameterized constructor | To set values of parameters |
| Get and set functions | Getter and setter for all attributes |
| accept() | Accept details from user.  [ validation   * Month value can be between 1-12 * If month is February, then day can be only 1-28 * If month is January, March,May,July,August,October,December then day can be 1-31 * otherwise, day can be 1-30 |
| operator<< | To display details |

Implement class Bill with following description.

|  |  |
| --- | --- |
| ***Data Member*** | ***Data Type*** |
| billnumber | int |
| customerinfo | Customer |
| billdate | Date |
| billamount | int |

Implement the below listed functions.

|  |  |
| --- | --- |
| ***Method*** | ***Description*** |
| default constructor | To assign default values |
| Get and set functions | Getter and setter for all attributes |
| accept() | Accept details from user |
| operator<< | To display details |
| Destructor | To free memory |

***Client Code:***

1. Create array of 3 Bill objects.
2. Accept details from user.
3. Display details using << operator.
4. Calculate total bill amount.
5. Display bill details for given customer.

Free memory when not in use.

Note: Code should be implemented in separate files like .h and .cpp

Add header guard and comments

Code should be properly indented.