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| **Class/Sec** | **BS(CS) Sec-B** |
| **Subject** | **OOPs** |
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**OOPs Assignment**

**Task 01:**

Identify all the Entities.

* Name of product, Specific code
* Number of product/stock
* Offices of the company
* Location of offices
* Product History
* Manager of offices
* Market value of product
* Number of Employees in each office
* Annual tax of company
* Customers of the product
* Total budget of company
* Annual sale of product
* Manager salary
* Annual profit earned by product
* Annual loss
* Electricity/Transport/Water bills and others
* Salaries of Employees, Guards and other company members

**Task 02:**

Shortlist al the Entities according to their relevance.

1. Product // All necessary details related to the product

1.1 Name of product

1.2 Product code

1.3 Product Market Value

1.4 Customers of product

1.5 Annual sale of product

2. Office // Complete information of offices

2.1 Name of Office

2.2 Complete Location

2.3 Office code

2.4 Manager of Office

2.5 Number of Employees in each Office

3. Monthly Bills // Monthly bills paid by the Company

3.1 Electricity bill

3.2 Water bill

3.3 Gas bill

3.4 Monthly Expenditure

3.5 Transport bill

4. Salary // Salaries for the company’s member

4.1 Manager salary

4.2 Employees salary

4.3 Company’s Guards salary

**Task 3:**

Proper C++ code.

#include<iostream>

using namespace std;

class product // Product class to store the major data of product

{

string product\_code;

string name\_of\_product;

double product\_market\_price;

int num\_of\_customer;

double annual\_sale\_of\_product;

void setCode(string product\_code) // to set the code of the product

{

this->product\_code = product\_code;

}

string getCode() // to get/read the code of product

{

return product\_code;

}

void setName(string name\_of\_product) // to set the name of product

{

this->name\_of\_product = name\_of\_product;

}

string getName() // to get/read the name of product

{

return name\_of\_product;

}

void setPrice(double product\_market\_price) // to set the price of product

{

this->product\_market\_price = product\_market\_price;

}

double getPrice() // to get/read the price of product

{

return product\_market\_price;

}

void setCutomer(int num\_of\_customer) // te set the number of customer/buyer of product

{

this->num\_of\_customer = num\_of\_customer;

}

int setCustomer() // to get/read the number of customer

{

return num\_of\_customer;

}

void setAnnualSale(double annual\_sale\_of\_product) // to set the annual sale of the product

{

this->annual\_sale\_of\_product = annual\_sale\_of\_product;

}

double getAnnualSale() // to get/read the annual sale of the product

{

return annual\_sale\_of\_product;

}

product(string product\_code, string name\_of\_product, double product\_market\_price, int num\_of\_customer, double annual\_sale\_of\_product)

{

//single constructor for class Product to assign the data on the time of object creating.

this->product\_code = product\_code;

this->name\_of\_product = name\_of\_product;

this->product\_market\_price = product\_market\_price;

this->num\_of\_customer = num\_of\_customer;

this->annual\_sale\_of\_product = annual\_sale\_of\_product;

}

};

class office // Office class to store the data of office.

{

string name\_of\_office;

string location; // to store the complete location of different offices

string office\_code; // to store the unique code for each office

string manager\_name; // Manager of office

int num\_of\_employee; // number of Employees in each office

void setName(string name\_of\_office) // to set the name of different officess

{

this->name\_of\_office = name\_of\_office;

}

string getName() // t get/read the name of officess

{

return name\_of\_office;

}

void setLocation(string location) // to set the exact location of the office

{

this->location = location;

}

string getLocation() // to get/read the location of the office

{

return location;

}

void setCode(string office\_code) // to set the unique code of each office

{

this->office\_code = office\_code;

}

string getCode() // to read the code of office

{

return office\_code;

}

void setManager(string manager\_name) // to set the name of manager of different officess

{

this->manager\_name = manager\_name;

}

string getManager() // to read the name of the manager

{

return manager\_name;

}

void setNum(int num\_of\_employee) // to set the number of employees work in each officess

{

this->num\_of\_employee = num\_of\_employee;

}

int getNum() // to get/read the number of employees work in the officess

{

return num\_of\_employee;

}

office(string name\_of\_office, string location, string office\_code, string manager\_name, int num\_of\_employee)

{

// Cunstructor for Class Office to store the data on the time of making object for class.

this->name\_of\_office = name\_of\_office;

this->location = location;

this->office\_code = office\_code;

this->manager\_name = manager\_name;

this->num\_of\_employee = num\_of\_employee;

}

};

class monthly\_bills // Monthly Bills class to store the monthly expenditure of the company.

{

double electricity\_bill;

double water\_bill;

double gas\_bill;

double monthly\_expenditure;

double transport\_bill;

public:

void setElectricity(double electricity\_bill) // to set the monthly electricity bill of office

{

this->electricity\_bill = electricity\_bill;

}

double getElectricity() // to set/read the amount of electricity bill

{

return electricity\_bill;

}

void setWater(double water\_bill)

{

this->water\_bill = water\_bill;

}

double getWater()

{

return water\_bill;

}

void setGas(double gas\_bill)

{

this->gas\_bill = gas\_bill;

}

double getGas()

{

return gas\_bill;

}

void setMonthly\_Expediture(double monthly\_expenditure)

{

this->monthly\_expenditure = monthly\_expenditure;

}

double getMonthly\_Expenditure()

{

return monthly\_expenditure;

}

void setTransport(double transport\_bill)

{

this->transport\_bill = transport\_bill;

}

double getTransport()

{

return transport\_bill;

}

monthly\_bills(double electricity\_bill, double water\_bill, double gas\_bill, double monthly\_expenditure, double transport\_bill)

{

// Cunstructor to take the amount of bill of Class Monthly Class.

this->electricity\_bill = electricity\_bill;

this->water\_bill = water\_bill;

this->gas\_bill = gas\_bill;

this->monthly\_expenditure = monthly\_expenditure;

this->transport\_bill = transport\_bill;

}

};

class Salary // Salary to store the salary of members.

{

double manager\_salary;

double employees\_salary;

double guards\_salary;

public:

void setManageSalary(double manager\_salary) // to set the salary of Manager

{

this->manager\_salary = manager\_salary;

}

double getManagerSalary() // to fet/read the salary of manager

{

return manager\_salary;

}

void setEmployeeSalary(double employees\_salary)

{

this->employees\_salary = employees\_salary;

}

double getEmployeeSalary()

{

return employees\_salary;

}

void setGuard\_Salary(double guards\_salary)

{

this->guards\_salary = guards\_salary;

}

double getGuard\_Salary()

{

return guards\_salary;

}

Salary(double manager\_salary, double employees\_salary, double guards\_salary)

{

// Contructor for Class Salary to store the values of class Salary.

this->manager\_salary = manager\_salary;

this->employees\_salary = employees\_salary;

this->guards\_salary = guards\_salary;

}

};