| Student ID: 2611208 | | |
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| Programming Concept (1 mark each = 8 marks) | Example code in ShopApp.java | Comment |
| variables | `private String name;` | Here, "name" is declared as a variable in the String data-type. |
| input/output | `static Scanner sc = new Scanner(System.in);`<br><br>`System.out.println("Student No.: 2611208");` | Here, the scanner class is declared as to take user input. The keyword "static" is used to use the scanner class throughout the app.<br><br>The "System.out.println();" is used to print any desired objects. |

| choices | ```java
switch(i)
{
    case 1:
    System.out.println("1. Product List");
    displayProducts(shop);
    break;

    case 2:
    buyStockMethod(ProName, Qty, shop, i, x);
    break;

    case 3:
    sellMethod(ProName, Qty, shop, i, x);
    break;

    case 4:
    setPriceMethod(ProName, Price, shop, i, x);
    break;

    case 5:
    totalValueMethod(shop);
    break;

    case 6:
    System.out.println("The app has now been exited.");
    System.out.println("\n");
    break;

    default:
    System.out.println("!!!!!Please Enter a valid Number!!!!!");
    System.out.println("");

    break;
}
``` | The switch statement is used so that the option selected by the user from the menu is executed.

The user has the choice to execute any option from the menu. |

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| loops | ```for(int i = 0; i < shop.length;i++)
    {
        System.out.println((i+1)+". Name: "+shop[i].getName()+" | Stock: "+shop[i].getStockLevel()+" | Price: £"+shop[i].getPrice());
    }``` | Here, a simple "for" loop is used in the "displayProducts" method to display all the products in the system. |
| input validation | ```while(xB != 'y' && xB != 'n')
{
    System.out.print("Invalid Input Enter Either 'y' for 'Yes' or 'n' for 'No': ");
    xB = sc.next().charAt(0);
    xB = Character.toLowerCase(xB);
}``` | Here, "While" loop is used to validate that the character entered by the user is either "y" or "n". |
| methods | ```static void studentNumber()
{
    System.out.println("\n");
    System.out.println("Student No.: 2611208");
    System.out.println("Student Name: Shyam Vijay Jagani");
    System.out.println("\n");
}``` | studentNumber method used in the app to display the student number as well as name of the student. |
| arrays | ```Product[] shop = new Product[5];``` | shop array created with a length of 5, that has 5 objects in the Product class. |

| classes/objects | ```java
public class Product

shop[0] = new Product(nameN:"Laptops     ", stockLevelN:12, priceN:1299.99);
shop[1] = new Product(nameN:"Smartphones ", stockLevelN:20, priceN:549.99);
shop[2] = new Product(nameN:"Smartwatches", stockLevelN:47, priceN:99.99);
shop[3] = new Product(nameN:"Tablets     ", stockLevelN:35, priceN:159.99);
shop[4] = new Product(nameN:"Headphones  ", stockLevelN:69, priceN:14.99);
``` | The class is Product class.<br><br>And 5 objects have been created in the Product class using the array declared above. |