**Assignment 2 Report: Object Oriented Programming Design**

Sheridan College

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PROG10004: Programming Principles

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**Part I: Object-Oriented Analysis**

|  |  |
| --- | --- |
| No. | Object |
| 1 | product\_one |
| 2 | Product Code |
| 3 | Product Name |
| 4 | Product Sale Price |
| 5 | Manufacture Cost |
| 6 | Stock Level |
| 7 | Estimated Monthly Units Manufactured |

**Part II: Object-Oriented Design**

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Object | Datatype: User-defined Class | Datatype: Predefined  / Type (Python) |
| 1 | product\_one | Product | N/A |
| 2 | Product Code | N/A | integer |
| 3 | Product Name | N/A | string |
| 4 | Product Sale Price | N/A | float |
| 5 | Manufacture Cost | N/A | float |
| 6 | Stock Level | N/A | integer |
| 7 | Estimated Monthly Units Manufactured | N/A | integer |

**Part III: Experiences and Reflection**

The assignment proved to be straightforward in the sense that the instance variables for the product were defined initially. As a result, it was relatively easy to create a single class constructing an object producing an instance of a product through the logic that was provided. The main challenge was the implementation of the 12-month model which would forecast the sale, production, and profitability of a product. Through troubleshooting, testing, and review, it became apparent where expressions needed to be to satisfy the report outputted onto the terminal. Likewise, conditions such as the stock difference if it were to go below a value of 0 would be pivotal in creating the framework of determining whether sales were possible. Another challenge was applying the bonus to the assignment. It was clear that in order to produce an option to decline or accept a sale when there is insufficient stock, it was necessary to capitalize on the stock difference condition. New variables such as unfulfilled\_sales were fundamental to allow the program to dictate a Boolean condition indicating unfulfilled sales. When taking into consideration the user input, definitions were used to neatly divide each input. While not entirely optimal, the user inputted variables were globalized in order to send these values through the Product class. Ultimately, assignment 2 was fundamentally straightforward but meaningful project which introduced object-oriented-programming well, and the challenges that were educational.