|  |  |
| --- | --- |
| **Assignment Case** |  |
| COMP6153  Operating System |
| **Computer Science** | **O213-COMP6153-CV01-01** |
| ***Valid on*** *Odd Semester Year 2020/2021* | **Revision 00** |

1. Seluruh mahasiswa tidak diperkenankan untuk:

*All students are not allowed to:*

* + 1. Melihat sebagian atau seluruh jawaban mahasiswa lain,

*Seeing a part or the whole answer from other student*

* + 1. Menyadur sebagian maupun seluruh jawaban dari buku,

*Adapted a part or the whole answer from the book*

* + 1. Mendownload sebagian maupun seluruh jawaban dari internet,

*Downloading a part or the whole answer from the internet,*

* + 1. Mengerjakan soal yang tidak sesuai dengan tema yang ada di soal,

*Working with another theme which is not in accordance with the existing theme in the matter of the case,*

* + 1. Melakukan tindakan kecurangan lainnya,

*Committing other dishonest actions,*

* + 1. Secara sengaja maupun tidak sengaja melakukan segala tindakan kelalaian yang menyebabkan hasil karyanya berhasil dicontek oleh orang lain / kelompok lain.

*Accidentally or intentionally conduct any failure action that cause the results of the project was copied by someone else / other groups.*

1. Jika mahasiswa terbukti melakukan tindakan seperti yang dijelaskan butir 1 di atas, maka **nilai mahasiswa** yang melakukan kecurangan (menyontek maupun dicontek) akan di – **NOL** – kan.

*If the student is proved to the actions described in point 1 above, the score of the student which committed dishonest acts (cheating or being cheated) will be “Zero”*

1. Perhatikan jadwal pengumpulan jawaban, segala jenis pengumpulan jawaban di luar jadwal tidak dilayani.

*Pay attention to the submission schedule, all kinds of submission outside the schedule will not be accepted*

1. Persentase penilaiaan untuk matakuliah ini adalah sebagai berikut:

*Marking percentage for this subject is described as follows:*

|  |  |  |
| --- | --- | --- |
| **Tugas Mandiri**  *Assignment* | **Proyek**  *Project* | **UAP**  *Final Exam* |
| 40% | - | 60% |

1. Software yang digunakan pada matakuliah ini adalah sebagai berikut:

*Software will be used in this subject are described as follows:*

|  |
| --- |
| **Software**  *Software* |
| VM Ubuntu Client 20.04  Java 8  Eclipse 2020.6  NachOS 5.0j |

## Ekstensi file yang harus disertakan dalam pengumpulan tugas mandiri dan uap untuk matakuliah ini adalah sebagai berikut:

*File extensions should be included in assignment and project collection for this subject are described as follows:*

|  |  |  |
| --- | --- | --- |
| **Tugas Mandiri**  *Assignment* | **Proyek**  *Project* | **UAP**  *Final Exam* |
| DOCX, JAVA, CLASS | - | JAVA, CLASS |

## Soal

*Case*

1. From the **home directory**, write a **command line** to create a directory based on the hierarchy below in **a** **single execution**!

<Home directory>

-- Sword Store

|-- SwordType

| |-- RegularSword

| |-- BigSword

|-- Material

| |-- Cobalt

| |-- Palladium

| |-- Mythril

1. Write a command line to create a new file named **ReadMe.txt** inside the **Material** folder and the file must contain the following string:

**Price formula = (Damage \* 100) + Material Price**

**Note that the command line must be done in a single execution.**

1. From the **Sword Store folder,** write a command line to **search and delete all directories** that does not contain any file.
2. Write a command line to **display your free operating system memory** in the form of **mebibytes (MiB).**

**Java Programming**

**Sword Craft**

In a small village, a young warrior wanted to buy his first-ever sword, but the shop keeper was sick and he asked you, his friend, to create a program to prevent if such an event were to happen again. As a programmer, you are asked to create a simple program to calculate the price of the product the customer want.

At the start of the application, the program will show **3 option** which represents features in the application which are:

* **Forge a Sword**
* **Forge a Big Sword**
* **Exit**

Sword Craft

===========

1. Forge a Sword

2. Forge a Big Sword

3. Exit

>>

**Figure 1. Main Menu**

1. **Forge a Sword**

The first menu option will ask the customer to forge a sword. This option will require the user to input information about the data of the sword that follows the following details which are:

* Ask the customer to **input the sword’s name**. The name must be **greater than or equal to 5.**

Sword Menu

==========

Input sword's name[minimal 5 characters] : Reav

Input sword's name[minimal 5 characters] : Reaver

**Figure 2. Input Sword Name**

* Ask the user to **input the material**. The user must type either “Cobalt”, “Palladium”, or “Mythril”(Case Sensitive). The price for each material is:

|  |  |
| --- | --- |
| **Material** | **Price** |
| Cobalt | 5000 |
| Palladium | 6000 |
| Mythril | 7000 |

Input material [Cobalt|Palladium|Mythril]: cobalT

Input material [Cobalt|Palladium|Mythril]: cobalt

Input material [Cobalt|Palladium|Mythril]: Cobalt

**Figure 3. Input Sword Material**

* Ask the user to **input damage**. The damage must be **between 1 and 100.** For **each damage** applied to the sword, **the price would increase by 100.**

Input damage [1-100]: 0

Input damage [1-100]: 101

Input damage [1-100]: 100

**Figure 4. Input Sword Damage**

* Calculate the sword’s price with the following formula:

**Price = ( Damage \* 100 ) + Material Price**

**Figure 5. Sword Price Formula**

* After all the required input has been filled, the program will show the full detail of the sword as well as the price of the sword.

Sword Specification

===================

Name : Reaver

Ore : Cobalt

Damage : 100

Price : 15000

Press enter to continue to main menu..

**Figure 6. Sword Detail**

1. **Forge a Big Sword**

The second menu option will ask the user to forge a big sword. **The big sword will require you to use the java inheritance concept.** This option will require the user to input information about the data of the big sword that follows the following details which are:

* Ask the user to **input the big sword’s name**. The big sword’s name must be **greater than or equal to 5.**

Big Sword Menu

==============

Input sword's name[minimal 5 characters] : Dura

Input sword's name[minimal 5 characters] : Durandal

**Figure 7. Input Big Sword Name**

* Ask the user to **input ore material**. The user must type either “Cobalt Ore”, “Palladium Ore”, or “Mythril Ore” (Case Sensitive)**. As the sword is bigger than the normal one, the price would be increased by 3000.**

Input material [Cobalt|Palladium|Mythril]: cobalT

Input material [Cobalt|Palladium|Mythril]: cobalt

Input material [Cobalt|Palladium|Mythril]: Cobalt

**Figure 8. Input Big Sword Material**

* Ask the user to **input damage**. The damage must be **between 1 and 100**. The damage of the sword would be **increased by 20, and thus will be affecting the price of the sword as well.**

Input damage [1-100]: 100

**Figure 9. Input Big Sword Damage**

* Calculate the big sword’s price with the following formula:

**Price = ( Damage \* 100 ) + Material Price**

**Figure 10. Sword Price Formula**

\* **Note that the damage above has been increased by 20 and the material price has been increased by 3000 as well\***

* After all the required input has been filled, the program will show the full detail of the big sword.

Sword Specification

===================

Name : Durandal

Ore : Cobalt

Damage : 120

Price : 20000

Press enter to continue to main menu..

**Figure 11. Big Sword Detail**

**\*Notice that the price must be calculated based on the damage of the sword after the damage was increased by 20\***

1. **Exit**

If the user chooses the third **option (Exit),** the program will exit.

Thank you for using my program!

Press enter to exit program..

**Figure 12. Exit Option**