****

**MAKERERE UNIVERSITY**

**COLLEGE OF ENGINEERING, DESIGN, ART AND TECHNOLOGY**

**SCHOOL OF ENGINEERING**

**DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING**

**BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING**

**YEAR TWO 2024/25 SEMESTER ONE**

|  |  |
| --- | --- |
| NAME | REGISTRATION NUMBER |
| ANTERURA ABRAHAM | 23/U/0233 |
| NATUKUMA PATRICK JUNIOR | 23/U/15619/PSA |
| KIGANDA JULIUS | 23/U/0586 |
| KEMIGISHA LISA | 23/U/09622/PS |
| NAMATOVU AMINAH | 2/U/1100 |
| MUKIISA PEACE MUGAYA | 23/U/27755 |

**Algorithm**

Step 1(Password Check)

1. Input full name
2. Input course code(password)
3. Verify password;

* If correct, proceed to step 2
* If incorrect, allow two more attempts
* If maximum attempts exceeded exit program

Step 2(Grade calculation)

1. Input number of tests taken
2. For each test;
   * + Input marks
     + Assign grade point based on the range of marks
     + If marks re invalid, prompt user to reenter the marks
3. Calculate GPA (Grade point average)

Step 3(Age calculation)

1. Input birth date (year, month, day)
2. Input current date (year, month, day)
3. Calculate age;

* Years = current year-birth year
* Months = current month-birth month
* Days = current day-birth day

Output

1. Display GPA
2. Display age (years, month, days)

Grade Point Assignment

|  |  |
| --- | --- |
| Marks range | Grade point |
| 90-100 | 5.0 |
| 80-89 | 5.0 |
| 75-79 | 4.5 |
| 70-74 | 4.0 |
| 65-69 | 3.5 |
| 60-64 | 3.0 |
| 55-59 | 2.5 |
| 50-54 | 2.0 |
| 45-49 | 1.5 |
| 40-44 | 1.0 |
| 0-39 | 0 |