# SE 1105 PROGRAMMING AND PROBLEM SOLVING I

## Week 3

## Task 1: Grade Calculation Program

Write and implement a simple grade calculation program that does the following:

- Ask the user to enter their midterm exam score.

- Ask the user to enter their final exam score.

- Calculate the average of the midterm and final exam scores by adding them together and dividing by 2.

- If the average score is equal to or greater than 50, print "You pass the course."

- If the average score is less than 50, print "You fail the course."

## Task 2: Arithmetic Operations Program

Write and implement a program that performs basic arithmetic operations based on user input. This program should consist of the following functions:

- **add**: Takes two integers, **a** and **b**, as parameters and returns their sum, which is **a + b**.

- **sub**: Takes two integers, **a** and **b**, as parameters and returns their difference, which is **a - b**.

- **mult**: Takes two integers, **a** and **b**, as parameters and returns their product, which is **a * b**.

- **div**: Takes two integers, **a** and **b**, as parameters and returns their quotient, which is **a / b**. Ensure that division by zero is not allowed in this task.

Additionally, create a **main** function that performs the following steps:

- Ask the user to enter an integer to select an operation from the following options:

    - 1 for Sum

    - 2 for Subtraction

    - 3 for Multiplication

    - 4 for Division

- Once the user has selected an operation, ask the user to enter two integers.

- Calculate the selected operation using the entered integers and print the result.

## Implementation Details

Programs should use scanf to take user input.

Ensure that the division operation (div) checks for division by zero to prevent any errors.