**台州学院**

**电子与信息工程学院课后作业**

班级 学号 姓名

作业日期： 2025 年 月 日

Week6 Methods

**Project: Computing Future Investment Value**

Problem Description:

Write a method that computes future investment value at a given interest rate for a specified number of years. The future investment is determined using the following formula:

futureInvestmentValue =

investmentAmount x (1 + monthlyInterestRate)numberOfYears\*12

Use the following method header:

**public static double** futureInvestmentValue(

**double** investmentAmount, **double** monthlyInterestRate, **int** years)

For example, futureInvestmentValue(10000, 0.05/12, 5) returns 12833.59.

Write a test program that prompts the user to enter the investment amount (e.g., 1000) and the interest rate (e.g., 9%) and prints a table that displays future value for the years from 1 to 30, as shown below:

The amount invested: 1000

Annual interest rate: 9%

Years Future Value

1 1093.80

2 1196.41

...

29 13467.25

30 14730.57

Analysis:

(Describe the problem including input and output in your own words.)

Design:

(Describe the major steps for solving the problem.)

Coding: (Copy and Paste Source Code here. Format your code using Courier 10pts)

Name your program Exercise06\_07

Testing: (Describe how you test this program)