C++ Basics

Computer Programming for Engineers

Week1

Aug/31/2017
Problem #1 Discount Installment Loan

• One form of loan
• Suppose
  • Face value: $1000
  • Interest rate: 15%
  • Duration: 18 months
Problem #1 Discount Installment Loan

- Interest: face value * interest rate
  \[ = 1000 \times 0.15 \]
  \[ = $150 \]

- Total interest: interest * years
  \[ = 150 \times 1.5 = $225 \]

- Customer receives: $775
  - Total interest is deducted from face value

- Monthly payment: face value / duration
  \[ = 1000 / 18 = $55.56 \]
Problem #1 Discount Installment Loan

- Calculate face value using
  - Customer’s receive
  - Interest rate
  - Duration months

- Output (2 digits after decimal point)
  - Face value
  - Monthly payment

1000.00 55.56
Problem #2 Midterm & Final Score

• Get midterm and final scores from a user
  • Math and English scores (Integer values)
  • Show prompt

• Calculate sum and average scores of each subject
  • Floating values

• Print sum and average scores of each subject
  • Follow format
  • 3 digits after decimal point
Problem #2 Midterm & Final Score

- Example
  - Use tabs(“\t”) for blanks of output

Midterm scores (math & eng): 50 100
Final scores (math & eng): 73 89

Subject Sum Avg Promp
Math 123 61.500 \t
English 189 94.500
Thank You