

# 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  
=  $1000 * 0.15$   
= \$150
- Total interest : interest \* years  
=  $150 * 1.5 = \$225$
- 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

2 digits 2 digits

Blank

# 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  
Math \t 123 \t 61.500  
English 189 94.500
```

Prompt

Thank You