

King Fahd University of Petroleum and Minerals  
College of Computer Science and Engineering  
Information and Computer Science Department  
**Spring Semester (062)**  
**ICS 102 - Introduction to Computing I**  
**Homework # 01**

**Solve the following Problems**

**Q1.** The straight-line method for computing the yearly depreciation in value  $D$  for an item is given by the formula

$$D = \frac{P - S}{Y},$$

where  $P$  is the purchase price,  $S$  is the salvage value, and  $Y$  is the number of years the item is used. Write a program that takes as input the purchase price of an item, the expected number of years of service, and the expected salvage value. The program should then output the yearly depreciation for the item.

**Q2.** One way to estimate the adult height of a child is to use the following formula, which uses the height of the parents:

$$H_{male\_child} = \frac{((H_{mother} \times \frac{13}{12}) + H_{father})}{2}$$

$$H_{female\_child} = \frac{((H_{father} \times \frac{12}{13}) + H_{mother})}{2}$$

All heights are in inches. Write a program that takes as input the gender of the child, the height of the mother in inches, and the height of the father in inches, and outputs the estimated adult height of the child in inches. The user should be able to input the heights in feet and inches, and the program should output the estimated height of the child in feet and inches. Use the integer data type to store the heights.

**Notes:**

- Due date is **Wednesday March 21, 2007 by 4:00 PM**
- *Late work is not accepted.*
- *Copying will result in a grade of F in the course.*