**Title**: Strings and Formatting  
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**Course & Section**: CSC 109-103W

**Description**: This program asks for various information about the user and then displays a specific message based on the input.

**Initial Algorithm**

Get user’s first name

Get user’s last name

Get number of hours slept in a day

Get desired hourly income

Set the user’s first initial as the lower case first letter of their first name

Set the user’s last initial as the lower case first letter of their last name

Calculate the percentage of hours slept in a day, formatted as a percentage

Calculate the salary based on a 40-hour week, formatted as a currency

Display “<first initial> <last initial> sleeps <percentage> of each 24 hour period and would like to earn <salary> per week.”

**Data Requirements**:

Attributes:

firstName – This is the user’s first name

lastName – This is the user’s last name

hoursSlept – This is the hours the user sleeps in a day

desiredIncome – This is the user’s desired hourly income

HOURS\_IN\_DAY – This is the number of hours in a day

HOURS\_WORKED\_IN\_WEEK – This is the number of hours the user works in a week

Behaviors:

nameCase – This method converts a name into Title Case

setFirstName – This method sets the user’s first name in Title Case

getFirstName – This method gets the user’s first name

getFirstInitial – This method gets the user’s first initial in lower case

setLastName – This method sets the user’s last name in Title Case

getLastName – This method gets the user’s last name

getLastInitial – This method gets the user’s last initial in lower case

setHoursSlept – This method sets the number of hours the user sleeps in a day

getHoursSlept – This method gets the number of hours the user sleeps in a day

getPercentSlept – This method gets the percentage of hours the user sleeps in a day, formatted as a percentage

setDesiredSalary – This method sets the user’s desired hourly salary

getDesiredSalary – This method gets user’s desired hourly salary

getWeeklySalary – This method gets the user’s desired weekly salary, based on a 40-hour week, formatted as a currency

**Formulas**:

percentSlept = getHoursSlept() / HOURS\_IN\_DAY

weeklySalary = getDesiredSalary() \* HOURS\_WORKED\_IN\_WEEK

**Refined Algorithm**

Get user’s first name

Get user’s last name

Get number of hours slept in a day

Get desired hourly income

Set the user’s first initial as the lower case first letter of their first name

Set the user’s last initial as the lower case first letter of their last name

Calculate the percentage of hours slept in a day, formatted as a percentage

Calculate the salary based on a 40-hour week, formatted as a currency

Display “<first initial> <last initial> sleeps <percentage> of each 24 hour period and would like to earn <salary> per week.”