Tessa Vu

3A Computer Programming I

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| **Date Assigned: 1/29/16** | **Date Due: 2/2/16** |
| **Unit:** Language Basics | **Turn In List:** **1. This document** |
| *“I will understand and implement date/time features of my language.”* | |

**Title: It’s a Date**

**Content Objectives:** Students will properly use their language date/time features to make comparisons and calculations.

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| **Starter Activity** |
| How do you print the current full date and time in your language? |

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| **Assignment:** |
| Students will use the following websites and internet searches to complete the table below:  Java: <http://www.tutorialspoint.com/java/java_date_time.htm> Note the use of millis!  C++: <http://www.tutorialspoint.com/cplusplus/cpp_date_time.htm>  Python: <http://www.tutorialspoint.com/python/python_date_time.htm>  C#: <https://msdn.microsoft.com/en-us/library/system.datetime.now(v=vs.110).aspx>  C++ and Python: note the use of a structure to handle individual elements of the date/time! |

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| **Include Sample Code or Explanation for the following Concepts Below (copy and paste lines from editor)** | |
| Code to print current time only: |  |
| Code to print current date as: Day Month Year | import java.util.Date;  public class CurrentDate {  public static void main(String args[]) {  Date date = new Date();  SimpleDateFormat ft =  new SimpleDateFormat (“dd.MM.yyyy”);  }  } |
| Code to format date as: YYYY/MM/DD | import java.util.Date;  public class CurrentDate {  public static void main(String args[]) {  Date date = new Date();  SimpleDateFormat ft =  new SimpleDateFormat (“yyyy.MM.dd”);  }  } |
| Code to convert (cast)current date/time to string | import java.util.Date;  public class CurrentDate {  public static void main(String args[]) {  Date date = new Date();  System.out.printf(“%1$s %2$tB %2$td, &2$tY”, “Today’s date is ”, date);  }  } |

Psuedocode an app that asks for the user’s birthdate and calculates the age in millenniums, centuries, decades, years, months, days, hours, minutes, seconds.

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| import java.util.Scanner;  import java.util.Calendar;  public class BirthDate {  public static void main(String[] args) {  Scanner keyboard = new Scanner(System.in);  System.out.println(“Year: “);  int year = keyboard.nextInt();  System.out.println(“Month: “);  int month = keyboard.nextInt();  System.out.println(“Day: ”);  Calendar now = Calendar.getInstance();  public Age() {  this.millennium = millennium;  this.centuries = centuries;  this.decades = decades;  this.years = years;  this.months = months;  this.days = days;  this.hours = hours;  this.minutes = minutes;  this.seconds = seconds;  }  public int getMillennium() {  return this.millennium;  }  public int getCenturies() {  return this.centuries;  }  public int getDecades() {  return this.decades;  }  public int getYears() {  return this.years;  }  public int getMonths() {  return this.Months;  }  public int getDays() {  return this.days;  }  public int getHours() {  return this.hours;  }  public int getMinutes() {  return this.minutes;  }  public int getSeconds() {  return this.seconds;  }  }  }  System.out.println(millennium + “ millennia, “ + centuries + “ century, ” + decades + “ decade(s), ” + years + “ year(s), ” + months + “ month(s), ” + days + “ day(s), ” + hours + “ hour(s), ” + minutes + “ minute(s), ” + seconds + “ second(s).”);  } |

Code the app that calculates the above psuedocode (note: depending on your language, you may need to ask for day, month and year separately and set each value to a global variable…) Consider adding functionality to ask for two dates and calculate the difference between them.

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| import java.util.Scanner;  import java.util.Calendar;  public class BirthDate {  public static void main(String[] args) {  Scanner keyboard = new Scanner(System.in);  System.out.println(“Year: “);  int year = keyboard.nextInt();  System.out.println(“Month: “);  int month = keyboard.nextInt();  System.out.println(“Day: ”);  Calendar now = Calendar.getInstance();  public Age() {  this.millennium = millennium;  this.centuries = centuries;  this.decades = decades;  this.years = years;  this.months = months;  this.days = days;  this.hours = hours;  this.minutes = minutes;  this.seconds = seconds;  }  public int getMillennium() {  return this.millennium;  }  public int getCenturies() {  return this.centuries;  }  public int getDecades() {  return this.decades;  }  public int getYears() {  return this.years;  }  public int getMonths() {  return this.Months;  }  public int getDays() {  return this.days;  }  public int getHours() {  return this.hours;  }  public int getMinutes() {  return this.minutes;  }  public int getSeconds() {  return this.seconds;  }  }  }  System.out.println(millennium + “ millennia, “ + centuries + “ century, ” + decades + “ decade(s), ” + years + “ year(s), ” + months + “ month(s), ” + days + “ day(s), ” + hours + “ hour(s), ” + minutes + “ minute(s), ” + seconds + “ second(s).”);  } |