

<b>WDDM115</b>	<b>Assignment 2</b>	<b>Contribution:25% of course</b>
<b>Professor : Kadee, .Best</b>	<b>Date Given: November 26th 2019</b>	<b>Date Due: December 8th 2019</b>

**Notes for the Student:** This Assignment is designed to test your ability to solve problems using and by applying the core programming constructs (variables, decision making constructs, loops, functions,etc ) using JavaScript.

#### **Assignment Regulations**

- An electronic copy of your work (both the web application and a written report) should be uploaded to Blackboard by 11:59pm on the date of submission.
- Submissions must be made through Blackboard. **Email submissions will not be accepted.**
- The written report **must** be in pdf format and must contain the following sections:
  - A cover page.
  - A table of contents.
  - Overview of web application-For this section, you are required to explain what your web application does, all the functionality implemented or not implemented .
  - A link to your Git repository
  - Screenshots of your website, with relevant descriptions, detailing the functionality.

#### **Assignment Regulations**

- This assignment must be done individually.
- **An in-person demonstration of this project is required. Failure to demonstrate your project would result in 0 marks.**
- **You must create a private Git repository and add me as a collaborator.**
- **Because this project is due on the last day of class, no late submissions will be accepted.**
- **As stated in your course outline :** “Academic honesty is integral to the learning process and a necessary ingredient of academic integrity. Academic dishonesty includes cheating, plagiarism, and impersonation. All of these occur when the work of others is presented by a student as their own and/or without citing sources of information. Breaches of academic honesty may result in a failing grade on the assignment/course, suspension or expulsion from the college.” **Thus, ensure that your script or any part of it is not duplicated by another student(s). This will result in a percentage of zero (0%) assigned to all parties involved.**

## **Detailed Problem Specification**

ABC College (ABCC) is a newly established Community College Located in Ontario with a student population of approximately five thousand (5000) and a large competent workforce. ABCC staff is divided into two (2) major groups, that is, regular staff and faculty.

Regular staff are paid a fixed gross salary each month, however their salary is prorated in the event the employee does not clock 160 hours for the month. Whereas, Faculty salaries are generated by the number of hours worked multiplied by their rate of pay plus a teaching allowance. Faculty rate of pay and teaching allowances are influenced by their level of qualifications.

All employees must incur a CIT (Canadian Income tax), that is, 25% of their gross salary and a health surcharge fee on their income. However, all employees are entitled to a Personal Canadian Income Tax Free Allowance of 2500.00 per month. This means that you do not pay income tax on your first 2500.00 of income, thus, you pay no income tax at all if you earn less than this amount.

Due to a failure in the existing manual payroll system, employees throughout the College have been paid inaccurate and erroneous salaries. The said issue has caused several problems throughout the college, protest, cancellation of classes, just to name a few. To alleviate the problems, the president of the college mandated that a script be implemented to generate and process salaries for employees throughout the college.

Luckily, you have been contracted as a Web programmer to complete the development of the Payroll Web Application for the college. **The web application must allow an Accounts clerk to generate any employee pay slip for any given month.**

Below lists the following features and business rules that must be implemented within the web applicaiton to ensure the correct calculation of salaries:-

1. Develop a properly designed interface that all an Accounts clerk to enter the employee number, name, department, hours' work for a given month and an employee type code for an employee.
  - a. An employee type code can ONLY be 'F' or 'f' for Faculty and 'R' or 'r' for regular workers.
2. **For Faculty :**
  - a. Allow the Accounts clerk to enter a Faculty qualification code.
  - b. A qualification code can be either be "M" OR "B". A faculty with a qualification code "M" would imply that the faculty have obtained a master's degree. Whereas, a faculty with a qualification code "B" would imply that the faculty has only obtained a bachelor's degree.
  - c. Faculty with a master's degree would be paid \$175 per hour and their teaching allowance would be \$1500.00 per month. However, faculty with

just a bachelor's degree would be paid \$100 per hour and their teaching allowance would be \$600 per month.

- d. Please note, faculty gross salaries are generated by the number of hours worked for a given month multiplied by their rate of pay plus a teaching allowance.

### 3. For Regular workers

- a. Allow the Accounts clerk to enter the regular worker's fixed salary.
- b. ONLY if a Regular worker works 160 hours for the month then they would be paid that flat fixed salary.
- c. However, if a regular worker DID NOT WORK 160 hours for the month then their fixed salary has to be prorated. Thus, they would only be paid for the hours they worked for the month. To do this, your script would have to multiply the employee hourly rate by their hours of work.
- d. To get the employee hourly rate your program would have to divide the fixed salary by 160. (fixed salary/ 160).
- e. Regular workers are to be paid double time for all hours worked over 160 for the month.

### 4. Calculate Deductions

The mandatory deductions that all employees incur on their income are :-

1. A Canadian Income tax of 25% of their gross salary.
2. A health surcharge fee.
  - i. If an employee earns more than \$3000.00 per month then their health surcharge fee would be \$33.00.
  - ii. If an employee earns \$3000.00 or less than, then their health surcharge fee would be \$19.20.
3. Note, ALL employees are entitled to a Canadian Personal Income Tax Free Allowance of 2,500.00 per month.

### 5. Calculate Net pay

- a. The net pay for all employees is calculated by subtracting all deductions from the employee's gross salary.

### 6. Output

- a. After all the information is entered by the Accounts clerk, all relevant calculations must then be performed and then your ap[ should generate the pay slip for that employee, listing all the following information to the console : **Employee number, name, department, employee type, number of hours worked, gross salary, deductions and net pay.**

**GUIDELINES:**

1. Ensure that your code is well documented and indented properly.
2. Ensure that your variables are named appropriately.
3. Use constants where you deemed necessary.

**RUBRIC:**

Description	Marks Awarded
Properly designed interface using HTML and CSS	10
Well documented and indented code	5
Use of Appropriate variable names	2
Use of appropriate constants	3
Input(Captured the pertinent data from the user as indicated in the above-mentioned specification)	3
Output(Displayed all required information as indicated in the above-mentioned diagram)	2
Logic for Faculty Gross Salary	7
Logic for Regular Worker	10
Logic for Deductions	10
Logic for Net Salary	3
Use of functions	10
<b>Total</b>	<b>65</b>