

Application Design to Calculate Employee Salary in Truth and Calculus Table Learning

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ABSTRACT

Informatics logic is a compulsory subject students especially in propositional calculus material. Proposition calculus is generally studied by various groups of students, from high school to college level. Proposition calculus studies the true (True / False) value of a proposition. Truth table is a tool or table used to provide values with certain rules. The truth table is a table used to see the truth value of a premise / statement. To complete a proposition truth table, we must first find out how many different statements the table contains. This step is absolutely necessary so that there are no errors in solving the problem. Therefore, the authors are interested in making an application for calculating employee salaries with the calculus proposition method and truth tables that can be used to solve the problem of working on propositions manually, so as to produce accurate truth values. , which at the same time can be used as a medium for student learning.

Keywords: Propositional calculus, True/False, Logic.

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1. INTRODUCTION

Logic is a study of reasoning, in the large Indonesian dictionary it states the definition of reasoning, namely a way of thinking by developing something based on reason and not by feeling or experience. Logic was first developed by the Greek philosopher, Aristotle, about 2300 years ago. Currently, logic has a wide application in computer science, for example in the field of logarithmic truth analysis programming, computer design and so on. Informatics logic is a method used to calculate the truth value of propositions, while propositions are statements that can be determined by their truth value (true or false). Only sentences with true or false values are used in reasoning. This sentence is called a proposition. Based on the description above, the writer intends to make a final project of semester 1 with the title "Application of Calculating Employee Salaries in Learning Logic Informatics for Proposition Calculus".

2. MATERIAL AND METHOD

2.1 Research design

In this miniriset research design, the author uses PHP programming, XAMPP, Sublime Text 3, the author conducts experiments and tests on applications created by studying literatures related to the application preparation material to calculate employee salaries by applying it to the Kulkulus Proposition method by entering the same numbers in the application.

2.2 Design Technique

Application The system design technique used by the author in this study is to use PHP, XAMPP, Sublime Text 3 programming to design an application to calculate employee salaries.

2.3 Data

Data can be defined as facts that describe events and real unity. The data from this study include the object of the employee (employee name, working day, salary, bonus) manifested in the form of numbers and letters.

2.4 Information

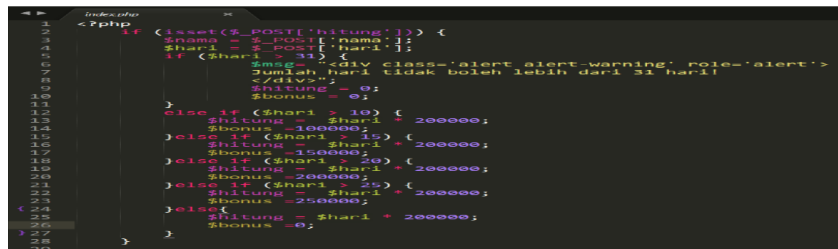
Information is the result of a process or the result of processing data which includes the results of the application work.

2.5 System

The system is a set of interrelated or integrated elements intended to achieve goals. The system in this study is in the form of an application method and is combined with the numbers entered in the Kulkulus Proposition material.

2.6 Input Design

Designing input is one of the most important parts in making an application because through this input form the user will interact with the computer.



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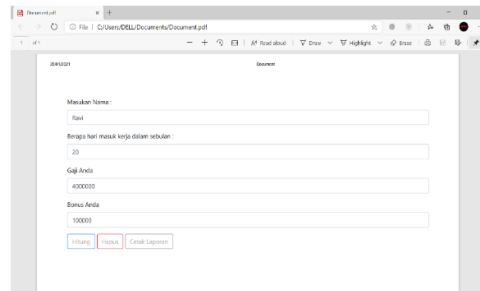
<?php
if (isset($_POST['hitung'])) {
    $nama = $_POST['nama'];
    $hari = $_POST['hari'];
    if ($hari < 10) {
        $msg = '<div class="alert alert-warning" role="alert">
        Jumlah hari tidak boleh lebih dari 31 hari!
        </div>';
        $hitung = 0;
        $bonus = 0;
    }
    else if ($hari > 10) {
        $hitung = $hari * 20000;
        $bonus = 100000;
    }
    else if ($hari > 15) {
        $hitung = $hari * 20000;
        $bonus = 150000;
    }
    else if ($hari > 20) {
        $hitung = $hari * 20000;
        $bonus = 200000;
    }
    else if ($hari > 25) {
        $hitung = $hari * 20000;
        $bonus = 250000;
    }
    else {
        $hitung = $hari * 20000;
        $bonus = 0;
    }
}

```

Fig 1. Input Design

2.7 Output Design

Output design is the process of designing the processed information output to the user / user who will see and use the information from these results. The design of this output is very important in making this application because the output will provide the needs of the user / user to display the data he needs.



Misalkan Nama:
 Berapa hari masuk kerja dalam sebulan:
 Gaji Awal:
 Bonus Awal:

Fig 2. Output Design

2.8 Kulkulus of Proposition

Proposition calculus is a method used to calculate the truth value of a proposition. Proposition calculus is commonly studied by various groups of students, from middle school to university level. Proposition calculus studies the true value (True / False) of a proposition.

3. RESULTS AND DISCUSSION

For how this application works, we enter the name of the employee, how many days he or she comes to work, the salary and bonus will appear with the following conditions:

- For employees who attend > 10, they will get a bonus of 100,000
- For employees who attend > 15, they will get a bonus of 150,000
- For employees who attend > 20, they will get a bonus of 200,000
- For employees who attend > 25, they will get a bonus of 250,000

e And apart from the attendance list above, he / she will not get a bonus

As for each menu above, such as "Enter name", "How many days to work in a month", "Your salary", "Your bonus", "Amount", "Delete", "Print Report". The following is an explanation:

a Enter Name

This menu is a mandatory menu and can be used to enter the name of the employee whose salary will be calculated.

b How many days to work in a month

This menu is a menu that you must also fill in so you can find out how long you have been working for a month.

c Your salary

This menu is a menu to find out how much your salary is during your work.

d Your bonus

This menu is a menu to find out how much your bonus is during your work

e amount

This is a menu to calculate how much your salary and bonuses are during your work.

f delete

This is a menu for deleting / resetting the data that you have previously entered.

g Print Report

This is a menu for printing our salary and bonus data in the application folder in the form of a .pdf extension.

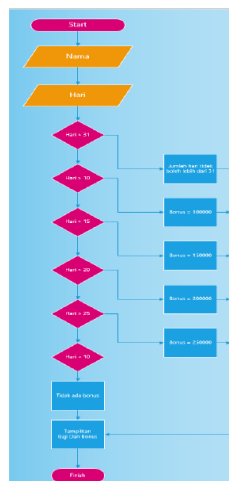


Fig 3. Flow Chart Of System

Implement the program into the proposition calculus

- Implication $p \rightarrow q$ states that p implies q
- p is called the antecedent and q is called the consequent
- if p is true then q is true, but if p is not true, then q may be true and may not be true

Enter the question, asked to determine the bonus:

p = if Ravi's salary comes to work for 25 days,

q = then Ravi gets a bonus

$p \rightarrow q$ = if Ravi comes to work for 25, then Ravi gets a bonus

Table1. Truth Table of employee salaries

p	q	$p \rightarrow q$
T	T	T
T	F	F
F	T	T
F	F	T

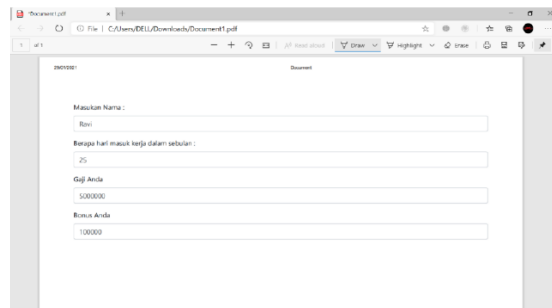


Fig 4. System of Employee Salaries

4. CONCLUSION

Logic is a study of reasoning, in the large Indonesian dictionary it states the definition of reasoning, namely a way of thinking by developing something based on reason and not by feeling or experience. Informatics logic can be used to determine whether a sentence is valid or contradictory, and whether two sentences are sentences - sentences that are equivalent to one another. The design of the application software for calculating employee salaries will make it easier for users to understand the process of working on the proposition culmination and the truth table by entering the values you want to enter into the application. Informatics logic is a method used to calculate the truth value of a proposition, while a proposition is a statement whose truth value can be determined (true or false)

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