

# ASSESSMENT

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## 1. Requirement

**Step 1** - First we need to create 3 data submission forms to Insert, Update, and Delete Employee data. It includes Id, Name, Email, and Job position. Data should verify before storing and all data should save in a database. Finally, show the employee list.

**Step 2** - Need to create a separate page for employees to calculate their working days between two dates. Saturday and Sunday are not allowed for the calculation. Dates should verify before calculation. Save public holidays on a table if needed. And finally, show the number of working days to the employee.

## 2. Plan to solve

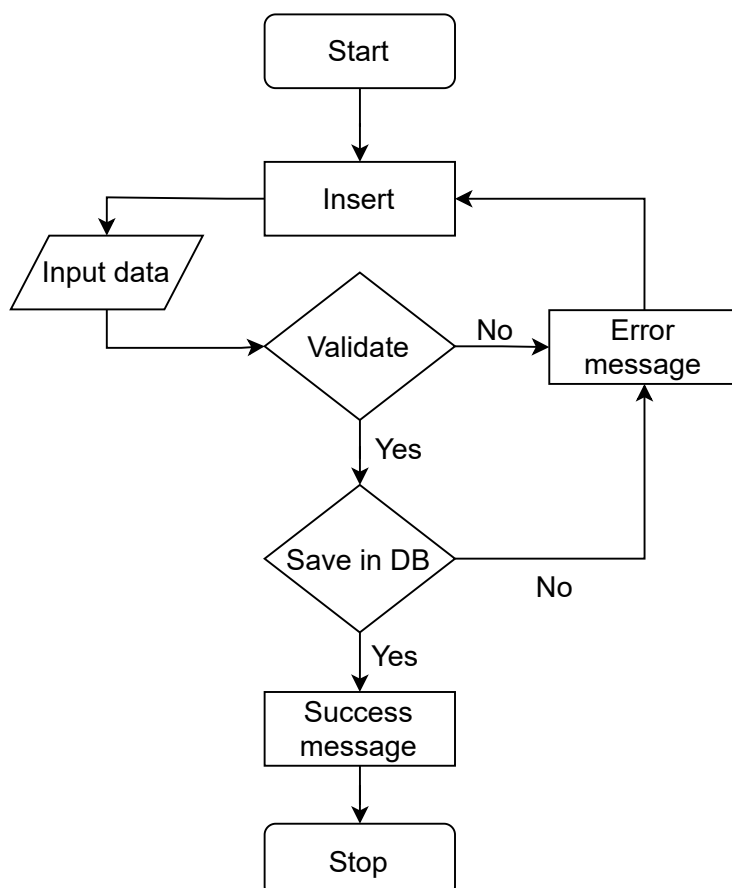
**Step 1** - Develop CRUD operations and other basic implementations.

**Step 2** - Implement the CACHE mechanism to display employee data.

**Step 3** - Design a page and write a program to calculate the employee working dates.

**Step 4** - Styling and finalizing the assessment.

## 3. Insert flowchart & Pseudocode



BEGIN

name:string  
email:string  
position:string

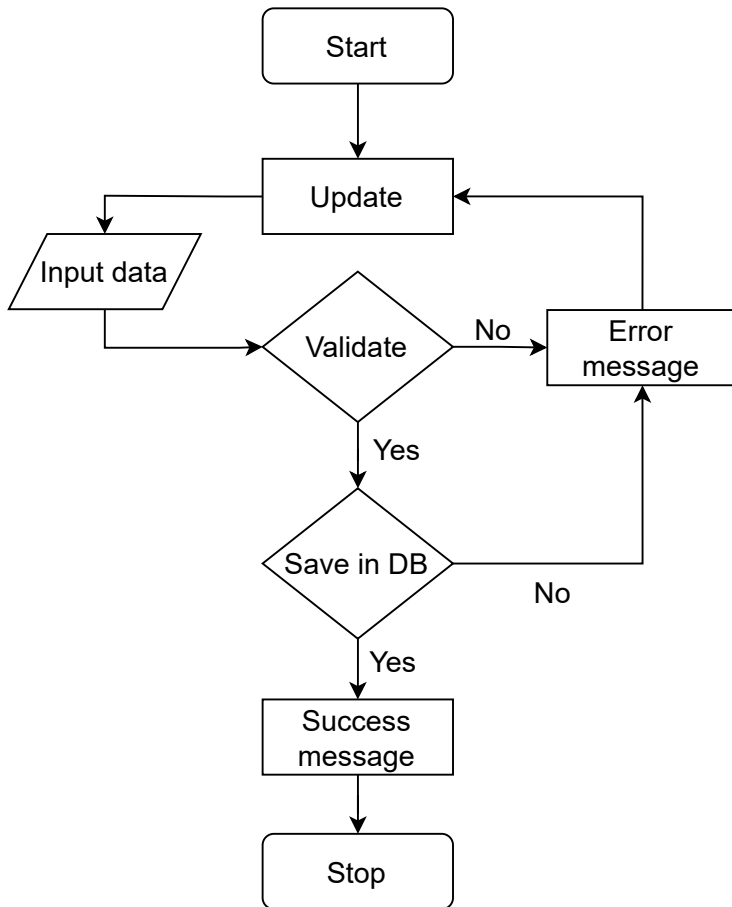
INPUT name,email,position

```
IF(name == empty) THEN
    DISPLAY "error message"
ELSE IF(email == empty) THEN
    DISPLAY "error message"
ELSE IF(position == empty) THEN
    DISPLAY "error message"
END IF
```

```
result = SaveData(name,email,position):bool
IF(result) THEN
    DISPLAY "success message"
ELSE THEN
    DISPLAY "error message"
END IF
```

END

#### 4. Update flowchart & Pseudocode



BEGIN

name:string  
email:string  
position:string

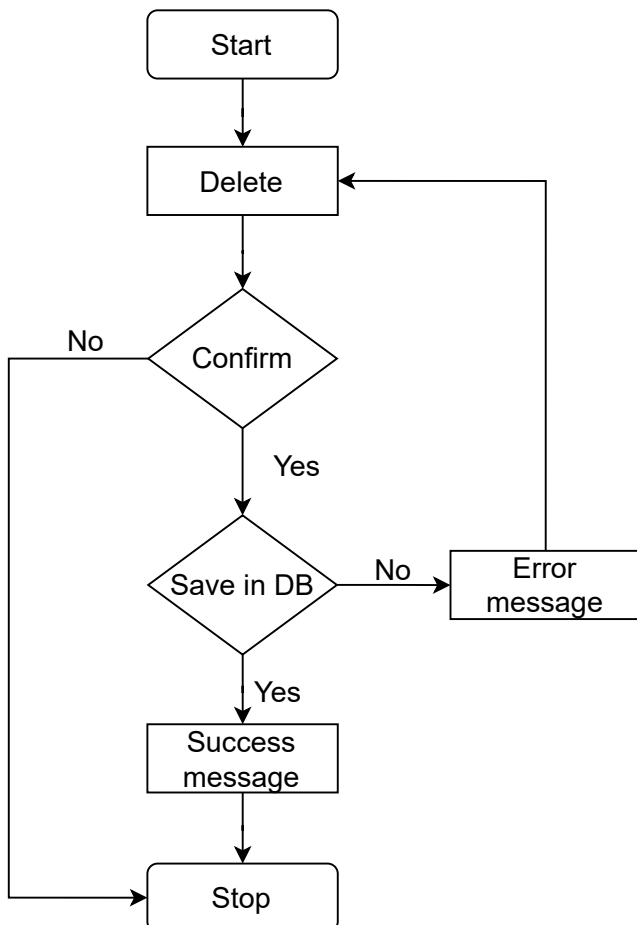
INPUT name,email,position

```
IF(name == empty) THEN
    DISPLAY "error message"
ELSE IF(email == empty) THEN
    DISPLAY "error message"
ELSE IF(position == empty) THEN
    DISPLAY "error message"
END IF
```

```
result = UpdateData(name,email,position):bool
IF(result) THEN
    DISPLAY "success message"
ELSE THEN
    DISPLAY "error message"
END IF
```

END

#### 5. Delete flowchart & Pseudocode

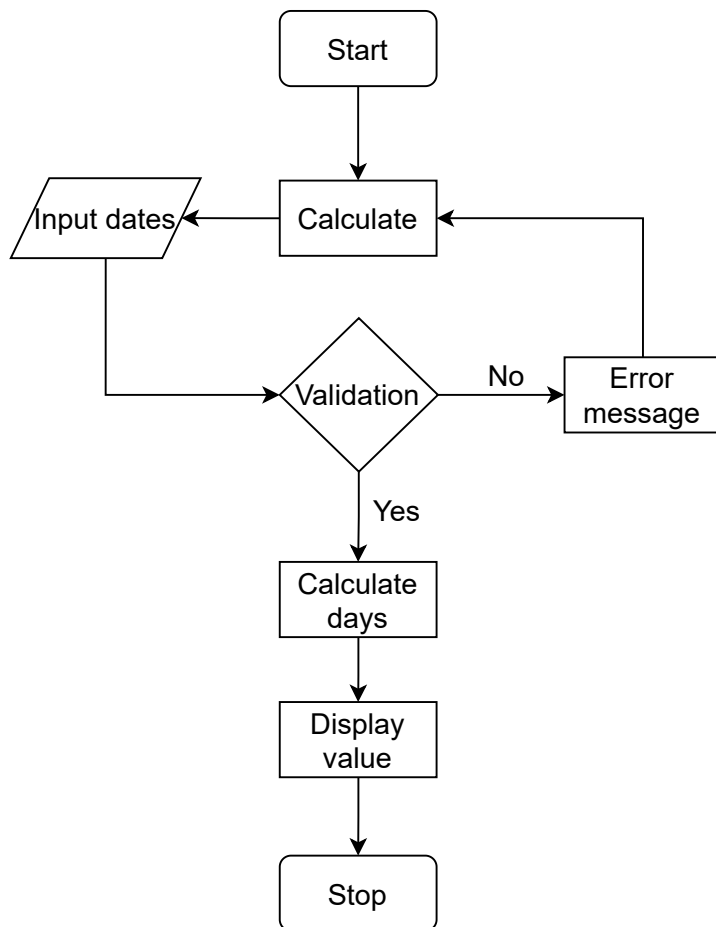


BEGIN

```
confirm = Confirm(id:int):bool
IF(confirm) THEN
    result = DeleteRecord(id:int):bool
    IF(result) THEN
        DISPLAY "success message"
    ELSE THEN
        DISPLAY "error message"
    END IF
END IF
```

END

## 6. Working days calculation



BEGIN

```
start_date:string
end_date:string
dates:array of string
days:int
```

INPUT start\_date,end\_date

```
IF(start_date > end_date) THEN
    DISPLAY "error message"
ELSE IF(isWeekend(start_date):bool) THEN
    DISPLAY "error message"
END IF
```

```
FUNCTION Calculate(start_date,end_date)
    dates = GetDates(start_date,end_date):array of string
    FOR(x=1;x<dates.length;x++)
        IF(isWeekend(dates[x]):bool) THEN
            remove current date from array
            CONTINUE
        ELSE IF(isHoliday(date[x]):bool) THEN
            remove current date from array
        END IF
    END FOR
```

```
    days = dates.length
    OUTPUT days
```

END FUNC

END

## 7. Issues during the development

1. No idea about the CachedLong method. And I have doubts about which data you want to cache. If I am correct I cached employee data and used that to load employee table view.

### NOTE

1. I used fewer validations, fewer error handlings, and a few other simple techniques to keep this assessment simple and within the given time frame, I would think I covered all the requirements in this assessment.

2. I'm not a frontend developer so, I used custom CSS and JavaScript for the UI and communicate with the server using JavaScript.

3. For simplicity I implemented working days calculation only for this month of this year. And it includes 6 world public holidays this month.