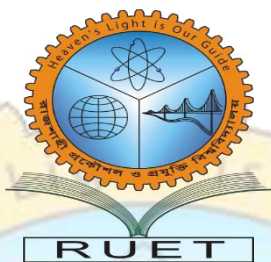


Heaven's light is our guide



**Department of Electrical & Computer
Engineering**

LAB REPORT

Course Title

Software Engineering & Information System
Design Sessional

Course Code: ECE 3118

Submitted By

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Session: 2020-21

Experiment Date: 21.04.2024

Submission Date: 15.11.2024

Submitted To

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ECE-RUET

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Experiment No. 1

Experiment Name: Report on Basic Documentation with Markdown, Practicing Naming Techniques in Programming and Study of different git commands

Objectives:

Basic Documentation with Markdown, best coding practices with comment to indicate the naming convention in program.

1. Write a code to manage shopping list to add, delete items to the list and display it – (Pascal)
2. Write a code to select CR where each student is represented by a structure containing their name, roll number, marks. CR is chosen based on highest mark - (Snake + Camel)
3. Write a code to add, subtract, multiply and divide – (Use different Techniques) And study of different git commands.

Implementation:

Markdown.md

```
# THIS IS THE BIGGEST HEADING WITH SINGLE HASH ## THIS IS  
WITH DOUBLE HASH  
### TRIPPLE HASH BUT REMEMBER YOU MUST USE SPACE BETWEEN THE HASH AND THE  
SENTENCE  
#### OTHERWISE IT WILL NOT WORK
```

****NOT JUST BOLD** BUT ALSO *ITALIC***

> I just have some sayings that I can put as quotes in markdown. Thanks to the creators of Markdown language
But it is not finishing. How those creators made it like gum.

- 1 . List One
- 2 . List Two
- 3 . List Three
- 4 . List Four
- 5 . List Five
- 6 . List Six

- unordered one
- unordered two
- unordered three

`is markdown a programming language or markup language?`

Here we have a original horizontal line to separate segments of documentation

[Link to Documentation](https://www.markdownguide.org/cheat-sheet/)
![Image or Link](https://w7.pngwing.com/pngs/918/742/png-transparent-logo-brand-markdown-others-blue-logo-sign-thumbnail.png)

NOW LET US COME TO THE TABLE TO EAT SOMETHING GOOD

```
| SYNTAX | DESCRIPTION |  
| ----- | ----- |  
| ** | MAKE YOUR TEXT BOLD BUT YOU CAN'T USE SPACE |  
| > | MAKE YOUR QUOTES BUT IT NEVER ENDS |
```

`SIMPLE CODE`

```
```\n{\n  lang: "markdown",\n  type: "not simple code", bool: true\n}\n```
```

# you ever been used to use footnote? {#footnote} term  
: here is what def This is a footnote [^2]

[^2]: this is the foot

~~Nothing is working properly brother~~  
` < here space is forbidden for strike ~~[to strike]~~`

### Track my Lab Report Progress

- [x] What is the Experiment?
- [x] Practice the Experiment
- [x] Make a Rough Report
- [ ] Revision and Improve
- [ ] Final Checkout and Print

:joy:

==very very very important element  $H^2 \sim 0$  or  $H^2 \neq 0$  or  $H^2 \neq 0$  or  $H^2 \neq 0$

// best-coding-practices.js

// Problem 1

```
let ProductList = [{Id:1,ProductName:"Laptop",Quantity:20, Price: 20000},
 {Id:2,ProductName:"Laptop",Quantity:20, Price: 20000},
 {Id:3,ProductName:"Laptop",Quantity:20, Price: 20000},
 {Id:4,ProductName:"Desktop",Quantity:10, Price: 80000}];
```

// Update Product List Function

```
let UpdateProductList = (Id, ProductName, Quantity, Price) => {
 ProductList.push({Id:Id,ProductName:ProductName,Quantity:Quantity,Price:Price});
}
```

```
let DeleteProduct = (ProductList,Id) => {
```

```
 ProductList = ProductList.filter(Product => Product.Id !== Id); return ProductList;
```

```
}
```

// Call Update Product List

```
UpdateProductList(5,"Mobile",10,8000);
```

// Display Function

```
let DisplayProductList = (ProductList) =>
 { ProductList.map((Product) => {
 console.log(Product)
 })
}
```

```
DisplayProductList(DeleteProduct(ProductList,2));
```

// Problem 2

// array name in snake\_naming\_convention let student\_list = [

```
{
```

```
 fullName: "TAJIM NOOR", // structure property names in
```

```
camelCase rollNumber:
```

21, marks: 89

```
},
{
 fullName: "DIBAKAR", rollNumber: 22,
 marks: 70
},
{
 fullName: "ADIB AL MEHMOOD",
```

```

 rollNumber: 23,
 marks: 90
 },
 {
 fullName: "SAKLAIN NOOR",
 rollNumber: 24,
 marks: 40
 },
 {
 fullName: "HAFIZ SAIMON", rollNumber: 25,
 marks: 50
 },
 {
 fullName: "TOUFIQ ISLAM", rollNumber: 26,
 marks: 75
 }
];

let choose_cr = (student_list) =>
 { let highest_mark = 0; let cr_roll = 0;
 student_list.map(student => {
 if(highest_mark<student.marks) {
 highest_mark = student.marks; cr_roll =
 student.rollNumber;
 }
 })
 student_list.map(student => { if(student.rollNumber ==
 cr_roll){
 console.log(student);
 }
 })
 }

```

```

//call cr choose_cr(student_list);

```

```

// Problem 3

```

```

function calculate(num1, num2) { const sum =
 num1 + num2;
 const difference = num1 - num2; const product
 = num1 * num2; const quotient = num1 / num2;
 return { sum, difference, product, quotient };
}

```

```

const result = calculate(10, 5);

```

```
console.log("Camel Case Results:", result);
```

```
function calculate_numbers(number_1, number_2)
{ const total_sum = number_1 + number_2; const difference
= number_1 - number_2; const product = number_1 *
number_2; const quotient = number_1 / number_2;
return { total_sum, difference, product, quotient };
}
```

```
const result = calculate_numbers(10, 5); console.log("Snake Case
Results:", result);
```

```
function CalculateNumbers(Number1, Number2) { const Sum =
Number1 + Number2;
const Difference = Number1 - Number2; const Product =
Number1 * Number2; const Quotient = Number1 /
Number2;
return { Sum, Difference, Product, Quotient };
}
```

```
const result = CalculateNumbers(10, 5); console.log("Pascal Case Results:", result);
```

```
function calculate-numbers(num-1, num-2)
{ const total-sum = num-1 + num-2; const
difference = num-1 - num-2; const product = num-1
* num-2; const quotient = num-1 / num-2;
return { 'total-sum': total-sum, difference, product,
quotient };
}
```

```
const result = calculate-numbers(10, 5); console.log("Kebab Case
Results:", result);
```

```
// git.sh git init
git add mylabfile.md git commit
-m "2010047" git status git diff
git branch main git
checkout dup git merge
dup
git remote add origin <remote_url> git push origin
main
git pull origin dup git log
```

```
git reset --hard <commit_hash> git revert
<commit_hash>
```

## Discussion

We can easily document any of our project with a readme markdown file. Naming techniques in programming act like road signs in our code, guiding everyone to understand what things do, reducing errors, saving maintenance time, and promoting collaboration through clear and consistent communication within the code itself. And git is the ultimate solution for any large scale team project collaboration.

## References

[1] Blog - Naming conventions in programming – a review of scientific literature:  
<https://arxiv.org/pdf/2103.07487>

[2] YouTube video - Programming Naming Conventions Every Programmer Should Know: <https://www.youtube.com/watch?v=ON00cOfZhX4>



