HND PRACTICAL PAPER 2020 – PROPOSED SOLUTION

SECCTION A

1. STRUCTURED PROGRAMMING

```
#include<stdio.h>
float minTwo(float p, float q);
float minFour(float p, float q, float r, float s);//Makes use of minTwo Function
float sum(float p, float q, float r, float s);

void main(){
        float a,b,c,d;
        float mean,m,n;
        printf("Give four floats: ");
        scanf("%f %f %f %f", &a,&b,&c,&d);

        m = minFour(a, b, c, d);
        n = sum(a, b, c, d);
        mean = sum(a, b, c, d)/4;
        printf("min: ");
        printf("%f", m);
        printf("\n");

        printf("sum: ");
        printf("%f", n);
        printf("\n");

        printf("mean: ");
        printf("%f", mean);
}
float minTwo(float p, float q){
        float ans;
        if(p < q){
                ans = p;
        }else{
                ans = q;
        }
        return ans;
}
float minFour(float p, float q, float r, float s){
        float x = minTwo(p, q);
        float y;
```

```
        if(r < s){
                y = r;
        }else{
                y = s;
        }
        float min = minTwo(x, y);
        return min;
}
float sum(float p, float q, float r, float s){
        float total = p + q + r + s;
        return total;
}
```

2. OBJECT ORIENTED PROGRAMMING (USING C++):

```
#include<iostream>
#include<string.h>
using namespace std;
class BankAccount{
        public:
                string name, pin;
                private:
                        int amount;
                        public:
                                BankAccount(){
                                        amount = 0;
                                        name = "Tubuo";
                                        pin = "pin";
                                }

                                int deposit(string name1, string pin1, int amt1){
                                        amount += amt1;
                                        cout<<amount;
```

```
                return amount;
        }
        int withdrawal(string name2, string pin2, int amt2){
                amount -= amt2;
                cout<<amount;
                return amount;
        }
        int get_balance(string name3, string pin3){
                cout<<amount;
                return amount;
        }
        void change_pin(string name4, string oldpin, string
newpin){
                pin = newpin;
        }

};

int main(){
        BankAccount Ba;
        string myname, mypin;
        cout<<"Enter pin value:\t";
        cin>>mypin;
        cout<<"\nEnter your name:\t";
        cin>>myname;
        if(mypin == Ba.pin){
                string newpin;
                cout<<"\nEnter new pin:\t"<<endl;
                cin>>newpin;
                Ba.change_pin(myname, mypin, newpin);
```

```
cout<<"\n\nPIN  Changed successfully!"<<endl;

int depAmt1,  depAmt2,  depAmt3;

//Deposit 1:
cout<<"\nEnter  deposit amount:\t";
cin>>depAmt1;
cout<<"Current  Balance:";
Ba.deposit(myname, Ba.pin, depAmt1);

//Deposit 2:
cout<<"\n\nEnter  deposit amount:\t";
cin>>depAmt2;
cout<<"Current  Balance:";
Ba.deposit(myname, Ba.pin, depAmt2);

//Deposit 3:
cout<<"\n\nEnter  deposit amount:\t";
cin>>depAmt3;
cout<<"Current  Balance:";
Ba.deposit(myname, Ba.pin, depAmt3);

int withAmt1,  withAmt2,  withAmt3;
//Withdrawal 1:
cout<<"\nEnter  Withdraw amount:\t";
cin>>withAmt1;
cout<<"Current  Balance:";
Ba.withdrawal(myname,  Ba.pin, withAmt1);
```

```
            //Withdrawal 2:
            cout<<"\n\n\nEnter  withdraw amount:\t";
            cin>>withAmt2;
            cout<<"Current  Balance:";
            Ba.withdrawal(myname, Ba.pin, withAmt2);

            //Withdrawal 3:
            cout<<"\n\nEnter  withdraw amount:\t";
            cin>>withAmt3;
            cout<<"Current  Balance:";
            Ba.withdrawal(myname, Ba.pin, withAmt3);

        } else{
            cout<<"\n\nWrong  Pin Entered";
        }
        return 0;
    }
```

SECTION B: DATABASE DEVELOPMENT AND ADMINISTRATION

1. SELECT Name,product FROM Customer, Orders WHERE Customer.customerId = Orders.customerId;
2. SELECT OrderId,product FROM Orders WHERE Orders.customerId = (SELECT customerId FROM Customer WHERE Name = "ROMUALD");
3. SELECT product AS Most_Asked FROM orders Group By product ORDER BY COUNT(product) DESC LIMIT 1;
4. SELECT Date from orders where orders.customerid = (SELECT customerid FROM Customer WHERE Name = "Frank");

SECTION C: WEB DESIGN:

PART 1:

- **Index page (Has all the other frame sources):**

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>HND Practical - 2020</title>
    <style>
        body{
            overflow-y: hidden;
        }
    </style>
</head>

    <frameset rows="5%, 90%, 5%">
        <frame src="header.html" name="top">
            <frameset cols="20%, 80%" border="1px black">
                <frame src="frame1.html" name="middleleft">
                <frame src="frame2.html" name="middleright">
            </frameset>
        <frame src="footer.html" name="bottom">
    </frameset>

<noframes>
    <body>
        Your Browser doesn't support frames!
    </body>
</noframes>
</html>
```

- **Header.html:**

```
<html>
    <head>
        <style>
            body{
                overflow-y: hidden;
            }
        </style>
    </head>
    <body style="background-color: grey;">
        <center>
            <p style="font-size: 25px; font-weight: bold;">header</p>
        </center>
```

```
    </body>
</html>
```

- **frame1.html:**

```
<html>


<body>
    <center style="margin-top: 45vh;">
        <p style="font-size: 25px; font-weight: bold;">Menu</p>
    </center>
</body>

</html>
```

-frame2.html:

```
<html>


<body style="background-color: grey;">
    <center style="margin-top: 45vh;">
        <p style="font-size: 25px; font-weight: bold;">Content</p>
    </center>
</body>

</html>
```

- **Footer.html:**

```
<html>

<head>
    <style>
        body {
            overflow-y: hidden;
        }
    </style>
</head>

<body style="background-color: grey;">
    <center>
        <p style="font-size: 25px; font-weight: bold;">footer</p>
    </center>
</body>
```

```
</html>
```

PART 2:

Calculator.html:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>HND 2020-web Calculator</title>
    <link rel="stylesheet" type="text/css" href="calculator.css">
    <link rel="stylesheet" href="style.css">
</head>

<body>
    <center>
        <div>
            <form name="calculator">
                <div class="screen">
                    <!--Calculator's screen-->
                    <input id="screen" type="text" name="display">
                </div>

                <div class="keyboard">
                    <!--Calculator keyboard area-->
                    <span>
                    <input type="button" value="9" onclick="calculator.display
.value +='9'">
                    <input type="button" value="8" onclick="calculator.display
.value +='8'">
                    <input type="button" value="7" onclick="calculator.display
.value +='7'">
                    <input type="button" value="*" onclick="calculator.display
.value +='*'">
                    </span> <br>

                    <span>
                <input type="button" value="6" onclick="calculator.display.val
ue +='6'">
                <input type="button" value="5" onclick="calculator.display.val
ue +='5'">
```

```
                <input type="button" value="4" onclick="calculator.display.val
ue +='4'">
                <input type="button" value="/" onclick="calculator.display.val
ue +='/'">
                </span><br>
                    <span>
                    <input type="button" value="3" onclick="calculator.display
.value +='3'">
                    <input type="button" value="2" onclick="calculator.display
.value +='2'">
                    <input type="button" value="1" onclick="calculator.display
.value +='1'">
                    <input type="button" value="-
" onclick="calculator.display.value +='-'">
                    </span><br>

                    <span style="margin-bottom: 1px;">
                    <input type="button" value="0" onclick="calculator.display
.value +='0'">
                    <input type="button" value="Clear" onclick="calculator.dis
play.value ='' " id="clear-btn">
                    <input type="button" value="=" onclick="calculator.display
.value = eval(calculator.display.value)" id="ans">
                    <input type="button" value="+" onclick="calculator.display
.value +='+'">
                </span><br>

            </form>
            </div>
    </center>
</body>

</html>
```

Calculator.css:

```
/*Calculator style*/

body {
    overflow-y: hidden;
    overflow-x: hidden;
}

form {
```

```
    display: block;
    width: 50%;
    height: 610px;
    background-color: rgb(98, 98, 98);
    color: black;
    font-weight: 700;
    overflow-y: hidden;
    overflow-x: hidden;
}

input[type=button] {
    border: 2px rgb(180, 180, 178);
    width: 100px;
    height: 50px;
    padding: 10px 12px;
    margin: 10px 5px;
    text-align: center;
    cursor: pointer;
    font-size: large;
    border: 1px white;
    border-radius: 3px;
}

span {
    display: flex;
    flex-direction: row;
    flex-grow: 2;
    flex-shrink: 2;
    justify-content: center;
    margin-left: 0px;
    margin-right: auto;
    padding: 2% 2%;
    width: 100%;
    position: relative;
}

.screen {
    display: block;
    width: 100%;
}

#screen {
    width: 98.9%;
    height: 120px;
    display: block;
    margin-top: 0px;
    border: 3px solid rgb(251, 241, 241);
    background-color: rgb(255, 251, 251);
    border-radius: 2px;
```

```
    color: rgb(22, 20, 20);
    text-align: right;
    font-size: 30px;
    display: block;
}
```

SECTION D: NETWORKING

N/B: Practically Connect the Networking tools to achieve the simple Local Area Network(LAN).

- Set the given IP addresses of the 3 PC's manually, by going to the control panel > Network and Internet > Network Sharing Center > Change Adapter Setting > Choose Ethernet > Properties > TCP/IPv4 > Configure IP address and subnet mask, Default Gateway.
- Connect all the computers to the ports on the switch, using copper straight through cables via their network interface controllers.
- Get the IP address on the switch
- Turn on Network discovery on all PC at the Network and Sharing Center of the Control Panel.
- After setting up the workstation, open DOS Command on your windows to test connectivity. **i.e: windows + R buttons > Type cmd > Press Enter.**
- **Ping all the computers on the network using: "ping ip_address".**
- Transfer Documents between the PC's as required, By right clicking on a file to share > Give access to > Choose pc devices to share > Click the Share Button
- Copy and Paste Files to share to specific or every network devise.