PRACTICAL-2

Console based node.js applications

1. **Create Node.js application which allow users to perform basic mathematical operations such as addition, subtraction, multiplication, and division. Description:**
   - **Create a Node.js script that takes command-line arguments to perform the desired mathematical operation.**
   - **Implement a logic for each mathematical operation (addition, subtraction, multiplication and division).**
   - **Handle invalid inputs and display appropriate error messages.**
   - **Ensure that the application can handle both integer and floating-point numbers.**

```
const args=process.argv;
var a = parseInt(args[2]);
var b = parseInt(args[4]);
console.log("21012021003_AMIT GOSWAMI")

switch(args[3]){
   case '+' :
      console.log("Result: " + (a+b));
      break;
   case '-' :
      console.log("Result: " + (a-b));
      break;
   case '*' :
      console.log("Result: " + (a*b));
      break;
   case '/' :
      console.log("Result: " + (a/b));
      break;
   case '%' :
      console.log("Result: " + (a%b));
      break;
   default :
console.log("you enter wrong arithmetic operator");
      break;
}
```

```
PS C:\Users\AMIT GOSWAMI\OneDrive\Desktop\SP> node Practical_2 6 + 9
21012021003_AMIT GOSWAMI
Addition 15
PS C:\Users\AMIT GOSWAMI\OneDrive\Desktop\SP> node Practical_2 6 - 9
21012021003_AMIT GOSWAMI
Subtract -3
PS C:\Users\AMIT GOSWAMI\OneDrive\Desktop\SP> node Practical_2 6 * 9
21012021003_AMIT GOSWAMI
Multiply 54
PS C:\Users\AMIT GOSWAMI\OneDrive\Desktop\SP> node Practical_2 6 \ 9
21012021003_AMIT GOSWAMI
you enter wrong arithmetic operator
PS C:\Users\AMIT GOSWAMI\OneDrive\Desktop\SP> node Practical_2 6 / 9
21012021003_AMIT GOSWAMI
divide 0.6666666666666666
```

2. **Write a node.js program to build a console application which allow users to perform the following operations:**
   - **Take contact details from user using ReadLine package.**
   - **Add a new contact details like name & phone number (Length should be 10) and store details in an array.**
   - **Display value of an array.**

```
console.log('21012021003_AMIT GOSWAMI');
const readline = require('readline');
let r1 = readline.createInterface(process.stdin,process.stdout);
r1.question('Enter your name: ', (Name) =>{
   r1.question('Enter your phone number: ', (Contact) => {
      if(Contact.length ==10){
         const array = [Name,Contact]
         console.log('Name ' + array[0]);
         console.log('Phone number ' + array[1]);
      }else{
         console.log('Invalid Contact Number');
      }
      r1.close();
   });
});
```

```
PS C:\Users\AMIT GOSWAMI\OneDrive\Desktop\SP> node "c:\Users\AMIT GOSWAMI
\SP\Practical_2.js"
21012021003_AMIT GOSWAMI
Enter your name: AMIT GOSWAMI
Enter your phone number: 1234567890
Name AMIT GOSWAMI
Phone number 1234567890
```

3. **Write a Node.js program to create an object named book using object literal syntax. Add book_title, author and publish_year as properties to the book object and assign it's appropriate values. Now create function print_info() to print the book object to the console so the final output looks as below:**
   title: Harry Potter and the Sorcerer's Stone
   author: J.K. Rowling
   publish_year: 1997

```
var book = {
book_title:'Harry Potter and the Sorcerers Stone',
   author:'J.K. Rowling',
   Publish_year:1997
}
console.log("21012021003_AMIT GOSWAMI");
function print_info(){
   for(i in book){
      console.log(i,":", book[i]);
   }
};
print_info();
```

```
PS C:\Users\AMIT GOSWAMI\OneDrive\Desktop\SP> node "c:\Users\
\SP\Practical_2.js"
21012021003_AMIT GOSWAMI
book_title --> Harry Potter and the Sorcerers Stone
author --> J.K. Rowling
publish_year --> 1997
```

4. **Create an array named products. Add objects to the array. Each object should be a single product, with 3 properties: name, inventory and unit_price. Create two functions named listProducts() and totalValue(). A listProducts() function accepts a parameter -- the array of products and it should return an array of the names of the products. A function named totalValue() should accept a parameter -- the array of products and it should return the total value of all of the products in the array. To calculate the total value of one product multiply the inventory value with the unit_price.**

```
var Brands =[
   {Name:'soap',Quantity:2,Per_Qn_Price:50},
   {Name:'Facewash',Quantity:2,Per_Qn_Price:200},
   {Name:'Sampoo',Quantity:2,Per_Qn_Price:380},
   {Name:'tooth-paste',Quantity:1,Per_Qn_Price:120},
   {Name:'Handwash',Quantity:3,Per_Qn_Price:100}
];

var Stock_List =function(n){
```

```
    console.log("List of the products")
    for(var temp in Brands){
        console.log(n[temp].Name)
    }
}
    Stock_List(Brands);

    var Total_Cost = function(m){
        var sum=0;

        for(var temp in Brands){
            var ans = (m[temp].Quantity*m[temp].Per_Qn_Price)
            sum = sum + parseInt(ans);
        }
        console.log("Total Cost: ",sum);

    }

Total_Cost(Brands);
```

```
PS C:\Users\AMIT GOSWAMI\OneDrive\Desktop\SP> node "c:\Users
\SP\Practical_2.js"
List of the products
soap
Facewash
Sampoo
tooth-paste
Handwash
Total Cost:  1680
```