

Program

```
calculator_menu()
{
    echo "1. Add"
    echo "2. Subtract"
    echo "3. Multiply"
    echo "4. Divide"
    echo "5. Sine"
    echo "6. Cos"
    echo "7. Tan"
    echo "8. Power"
    echo "9. Square root"
    echo "10. Exit"
}
read_num()
{
    read -p "Enter 2 numbers" a b
}
read_angle()
{
    read -p "Enter angle in degree" angle
}
while true
do
    calculator_menu
    read -p "Enter choice" choice
    case $choice in
        1)
            read_num
            echo "Sum: $(echo "$a+$b"|bc)"
            ;;
        2)
            read_num
            echo "Difference: $(echo "$a-$b"|bc)"
            ;;
        3)
            read_num
            echo "Product: $(echo "$a*$b"|bc)"
            ;;
        4)
            read_num
            echo "Quotient: $(echo "scale=2;$a/$b"|bc)"
            ;;
        5)
            break
    esac
done
```

```

        read_angle
        echo "Sine: $(echo "s($angle*4*a(1)/180)"|bc -l)"
        ;;
    6)
        read_angle
        echo "Cosine: $(echo "c($angle*4*a(1)/180)"|bc -l)"
        ;;
    7)
        read_angle
        echo "Tan: $(echo "s($angle*4*a(1)/180)/c($angle*4*a(1)/180)"|bc -l)"
        ;;
    8)
        read_num
        echo "Power $(echo "$a^$b"|bc -l)"
        ;;
    9)
        read -p "Enter number" num
        if (($echo "$num<0"|bc -l))
        then
            echo "Error"
        else
            echo "Square root: $(echo "sqrt($num)"|bc -l)"
        fi
        ;;
    10)
        echo "Exiting..."
        break
        ;;
    *)
        echo "Invalid input"
        ;;
esac
done

```

Sample run of the program

```
s23a40@Server-2:~/blab$ bash exp4.sh
1. Add
2. Subtract
3. Multiply
4. Divide
5. Sine
6. Cos
7. Tan
8. Power
9. Square root
10. Exit
Enter choice1
Enter 2 numbers2 4
Sum: 6
1. Add
2. Subtract
3. Multiply
4. Divide
5. Sine
6. Cos
7. Tan
8. Power
9. Square root
10. Exit
Enter choice5
Enter angle in degree90
Sine: 1.00000000000000000000
1. Add
2. Subtract
3. Multiply
4. Divide
5. Sine
6. Cos
7. Tan
8. Power
9. Square root
10. Exit
Enter choice10
Exiting...
s23a40@Server-2:~/blab$
```