



NEW YORK CITY COLLEGE OF TECHNOLOGY
THE CITY UNIVERSITY OF NEW YORK
Department of Computer Engineering Technology
300 Jay Street, Brooklyn, NY 11201-1909

LAB REPORT
EMT 2390L – OL76
(OPERATING SYSTEM LABORATORY)

LAB #8

Name: Puja Roy
Date: 4/18/21

Loan-calc Linux Script

pujaroy@DESKTOP-U16R768: ~

```
#!/bin/bash

# loan-calc : script to calculate monthly loan payments

PROGNAME=$(basename $0)

# Verbose
usage () {
cat <<- EOF
Usage: $PROGNAME PRINCIPAL INTEREST MONTHS
Where:
PRINCIPAL is the amount of the loan.
INTEREST is the APR as a number (7% = 0.07).
MONTHS is the length of the loan's term.
EOF
}

# Calculating loan to pay
calculate() {
    principal=$1
    interest=$2
    months=$3
    bc <<- EOF
    scale=10;
    i = $interest / 12
    p = $principal
    n = $months
    a = p * ((i * ((1 + i) ^ n)) / (((1 + i) ^ n) - 1))
    print a, "\n"
EOF
}

# Interactive
interactive() {
    echo "Enter the Principal amount: "
    read principal
    echo "Enter the interest (Ex: 7% = 0.07): "
    read interest
    echo "Enter the length of loan's term in months: "
    read months
    echo "Loan to pay: "
    d=$(calculate $principal $interest $months )
    printf "%.2f\n" $d
    exit 0;
}


# Accepting flag i and h
while getopts ':ih' flag; do
    case "${flag}" in
```

```

# Accepting flag i and h
while getopts ':ih' flag; do
    case "${flag}" in
        i) interactive;;
        h) usage ;;
        *) usage; exit 1; ;;
    esac
done

# When no flag is passed
if (($#==3)); then
    d=$(calculate $1 $2 $3)
    printf "%.2f\n" $d
    exit 0
else
    usage
    exit 1
fi

```

 pujaroy@DESKTOP-U16R768: ~

```

pujaroy@DESKTOP-U16R768:~$ ./loan-calc
Usage: loan-calc PRINCIPAL INTEREST MONTHS
Where:
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MONTHS is the length of the loan's term.
pujaroy@DESKTOP-U16R768:~$

```