

IDC101-Introduction to computers (Shell scripting)

Lab tasks – Session 03

November 28-29 2022

- Name your program as rollNo-WS-No-QNo (for example, if you are writing program for Q1, then, you should name it as rollNo-WS-03-Q1.sh)

Q 1. Write a bash script to reverse any natural number. The pseudo code is give below:

Pseudo code is informative text for implementation of an algorithm. You need to follow the pseudo code to implement the program in bash script. Replace human readable part with appropriate syntax.

Input number a

b=0

Repeat below steps till a –ne 0

y = a%10

*b = b*10+y*

a = a/10

Q 2. Write program to reverse any string. The method to read one character in any string is given below.

x=welcome

length of string x is given by

len=\${#x}

reading any one character in string x is given by '\${STRING:POSITION:LENGTH}'

The first position in a string is 0 and last position is LENGTH-OF-STRING-1

The code below return 'c'. In below code x is string variable

s=\${x:3:1}

the first character is given by

s=\${x:0:1}

the last character is given by

s=\${x:((len-1)):1}

You can reverse the string by repeating steps from last position of string till position 0.

Q 3. Write a script to convert any positive integer into binary number. You would require reverse string.

Q 4. Extend the program in Q3 to compute conversion to Octal and hexadecimal number. Make program interactive. Note: hexadecimal uses character 0-9 and A-F.