# Shell Scripting – Lab Exercises with Solutions

Session 6 – Basics & Automation

## Lab 1: Swapping Two Variables

#!/bin/bash  
echo -n "Enter value for A and B: "  
read a b  
t=$a  
a=$b  
b=$t  
echo "Values after Swapping:"  
echo "A = $a, B = $b"

or  
#!/bin/bash  
echo -n "Enter value for A and B: "  
read a b  
echo "Values after Swapping:"  
echo "A = $b, B = $a”

## Lab 2: Fahrenheit to Celsius

#!/bin/bash  
echo -n "Enter Fahrenheit: "  
read f  
c=$(( (f - 32) \* 5 / 9 ))  
echo "Celsius is: $c"

## Lab 3 Mini Calculator

## #!/bin/bash echo -n "Enter two numbers: " read a b echo "1. Addition" echo "2. Subtraction" echo "3. Multiplication" echo "4. Division" echo -n "Choose an option: " read op case $op in 1) echo "$a + $b = $((a + b))";; 2) echo "$a - $b = $((a - b))";; 3) echo "$a \* $b = $((a \* b))";; 4) echo "$a / $b = $((a / b))";; \*) echo "Invalid option";; esac

## Lab 4 Biggest of Three Numbers

#!/bin/bash  
echo -n "Enter values for A B and C: "  
read a b c  
if [ $a -gt $b ] && [ $a -gt $c ]; then  
 echo "A is the biggest"  
elif [ $b -gt $c ]; then  
 echo "B is the biggest"  
else  
 echo "C is the biggest"  
fi

## Lab 5: Grade Determination

#!/bin/bash  
echo -n "Enter your mark: "  
read mark  
if [ $mark -gt 90 ]; then  
 echo "S Grade"  
elif [ $mark -gt 80 ]; then  
 echo "A Grade"  
elif [ $mark -gt 70 ]; then  
 echo "B Grade"  
elif [ $mark -gt 60 ]; then  
 echo "C Grade"  
elif [ $mark -gt 55 ]; then  
 echo "D Grade"  
elif [ $mark -ge 50 ]; then  
 echo "E Grade"  
else  
 echo "U Grade"  
fi

## Lab 6: Vowel or Consonant

#!/bin/bash  
echo -n "Enter a lowercase character: "  
read choice  
case $choice in  
 a|e|i|o|u) echo "It's a vowel";;  
 \*) echo "It's a consonant";;  
esac

## Lab 7: Check lines and words

#!/bin/bash  
echo "Enter the file name:"  
read filename  
if [ -f "$filename" ]; then  
 echo "Counting lines and words in '$filename'..."  
 echo "Number of lines: $(wc -l < "$filename")"  
 echo "Number of words: $(wc -w < "$filename")"  
else  
 echo "File '$filename' not found."  
fi