

Assignment on Shell-Scripting

Task 1. Write a script that reads numbers from the user until they enter '0'. The script should also print whether each number is odd or even.

```
#!/bin/sh
echo "Enter the
number:"read num
if (( num % 2 == 1 ));
    then echo "odd"
else
    echo "even"
fi
```

Sample Output:

```
Enter a number:
3 is odd
Enter a number:
4 is even
```

Task 2. Display All the Directory Names :

```
#!/bin/sh
# Display all the directory names in a specified folder
read -p "Enter the folder path: " folder
if [ -d "$folder" ]; then
    echo "Directories in $folder:" find "$folder" -type d
```

else

```
echo "Folder not found"
```

```
fi
```

Sample Output: Enter the folder path: /home/rps/programs

Directories in /home/rps/programs: /home/rps/programs

/home/rps/programs/download

Task 3. Find the Smallest Number from the Array

```
#!/bin/sh
```

```
numbers=(44 7 92 1 25)
```

```
smallest=${numbers[0]}
```

```
for num in "${numbers[@]"; do
```

```
    if (( num < smallest )); then
```

```
        smallest=$num
```

```
    fi
```

```
done
```

```
echo "The smallest number is: $smallest"
```

Sample output: The smallest number is: 1

Task 4. Count the number of directory and files in specific folder.

```
#!/bin/sh
```

```
dir_count=0
```

```
file_count=0
```

```
folder="/path/to/your/programs"
```

```
for item in "$folder"/*; do
    if [ -d "$item" ]; then

        dir_count=$((dir_count + 1))

    elif [ -f "$item" ]; then

        file_count=$((file_count + 1))
    fi
done

echo "Total number of directories: $dir_count"

echo "Total number of files: $file_count"
```

Sample Output: Enter the folder path: /home/rps/programs

Number of directories: 1

Number of files: 18

Task 5. Find the Sum of the Array

```
#!/bin/bash

array=(10 5 15 3 7)

sum=0

for num in "${array[@]}"
do

    sum=$((sum + num))

done

echo "The sum of the array is: $sum"
```

Sample Output: The sum of the array is: 40

Task 6. Check whether the number is palindrome or not

```
#!/bin/bash

# Function to check if a number is a palindrome
is_palindrome() {

    local num=$1
    local reverse=0

    local temp=$num

    while [ $num -gt 0 ]

    do
        remainder=$(( $num % 10 ))

        reverse=$(( $reverse * 10 + $remainder ))

        num=$(( $num / 10 ))
    done

    if [ $temp -eq $reverse ]

    then

        echo "The number $temp is a palindrome."

    Else

        echo "The number $temp is not a palindrome."

    Fi

}

read -p "Enter a number: " num

is_palindrome $num
```

Sample Output: Enter a number: 141

141 is palindrome

Task 7. Ensure the script checks if a specific file (e.g., myfile.txt) exists in the current directory. If it exists, print "File exists", otherwise print "File not found".

```
#!/bin/bash
```

```
check_file() {
```

```
    local file_name=$1
```

```
    if [ -f "$file_name" ]
```

```
    then
```

```
        echo "File $file_name exists."
```

```
    Else
```

```
        echo "File $file_name not found."
```

```
    fi
```

```
}
```

```
file_name="myfile.txt"
```

```
check_file "$file_name"
```

Sample Output: Enter the File name: array.sh

File not found