

1. Write a shell script to generate mark- sheet of a student. Take 3 subjects, calculate and display total marks, percentage and class obtained by the student.

Display calendar of current month

```
PS C:\Users\Ankit>
PS C:\Users\Ankit> $m1 = Read-Host "Enter marks for Subject 1"
Enter marks for Subject 1: 14
PS C:\Users\Ankit> $m2 = Read-Host "Enter marks for Subject 2"
Enter marks for Subject 2: 45
PS C:\Users\Ankit> $m3 = Read-Host "Enter marks for Subject 3"
Enter marks for Subject 3: 67
PS C:\Users\Ankit>
PS C:\Users\Ankit> $total = [int]$m1 + [int]$m2 + [int]$m3
PS C:\Users\Ankit> $per = $total / 3
PS C:\Users\Ankit>
PS C:\Users\Ankit> Write-Host "Total Marks: $total"
Total Marks: 126
PS C:\Users\Ankit> Write-Host "Percentage: $per %"
Percentage: 42 %
PS C:\Users\Ankit> if ($per -ge 70) {
    >>     "Class: Distinction"
    >> } elseif ($per -ge 60) {
    >>     "Class: First Class"
    >> } elseif ($per -ge 50) {
    >>     "Class: Second Class"
    >> } else {
    >>     "Class: Fail"
    >> }
Class: Fail
PS C:\Users\Ankit>
```

2. Write a menu driven shell script which will print the following menu and execute the given task.

- Display calendar of current month

```
echo =====
=====
echo  SYSTEM INFORMATION MENU
    SYSTEM INFORMATION MENU
echo =====
=====
echo 1. Display Current Month/Date
1. Display Current Month/Date
echo 2. Display Today's Time
2. Display Today's Time
echo 3. Display Current User
3. Display Current User
echo 4. Display Terminal Name
4. Display Terminal Name
echo 5. Exit
5. Exit
echo =====
=====
set /p ch="Enter your choice (1-5): "
Enter your choice (1-5): 1
if "%ch%"=="1" (
More?     echo Date: %date%
More?     pause
More?     goto menu
More? )
Date: 19-01-2026
Press any key to continue . . .
```

- Display today's date and time

```
echo =====
=====
echo  SYSTEM INFORMATION MENU
    SYSTEM INFORMATION MENU
echo =====
=====
echo 1. Display Current Month/Date
1. Display Current Month/Date
echo 2. Display Today's Time
2. Display Today's Time
echo 3. Display Current User
3. Display Current User
echo 4. Display Terminal Name
4. Display Terminal Name
echo 5. Exit
5. Exit
echo =====
=====
set /p ch="Enter your choice (1-5): "
Enter your choice (1-5): 2
if "%ch%"=="1" (
More?     echo Date: %date%
More?     pause
More?     goto menu
More? )
if "%ch%"=="2" (
More?     echo Time: %time%
More?     pause
More?     goto menu
More? )
Time: 20:50:42.06
Press any key to continue . . .
```

- Display usernames those are currently logged in the system

```
echo =====
=====
echo SYSTEM INFORMATION MENU
SYSTEM INFORMATION MENU
echo =====
=====
echo 1. Display Current Month/Date
1. Display Current Month/Date
echo 2. Display Today's Time
2. Display Today's Time
echo 3. Display Current User
3. Display Current User
echo 4. Display Terminal Name
4. Display Terminal Name
echo 5. Exit
5. Exit
echo =====
=====
set /p ch="Enter your choice (1-5): "
Enter your choice (1-5): 3
if "%ch%"=="1" (
More?      echo Date: %date%
More?      pause
More?      goto menu
More? )
if "%ch%"=="2" (
More?      echo Time: %time%
More?      pause
More?      goto menu
More? )
if "%ch%"=="3" (
More?      whoami
More?      pause
More?      goto menu
More? )
ankit\ankit
Press any key to continue . . .
```

- Display Your terminal number

```
echo =====
=====
echo SYSTEM INFORMATION MENU
SYSTEM INFORMATION MENU
echo =====
=====
echo 1. Display Current Month/Date
1. Display Current Month/Date
echo 2. Display Today's Time
2. Display Today's Time
echo 3. Display Current User
3. Display Current User
echo 4. Display Terminal Name
4. Display Terminal Name
echo 5. Exit
5. Exit
echo =====
=====
set /p ch="Enter your choice (1-5): "
Enter your choice (1-5): 4
if "%ch%"=="1" (
More?     echo Date: %date%
More?     pause
More?     goto menu
More? )
if "%ch%"=="2" (
More?     echo Time: %time%
More?     pause
More?     goto menu
More? )
if "%ch%"=="3" (
More?     whoami
More?     pause
More?     goto menu
More? )
if "%ch%"=="4" (
More?     echo Terminal: %computername%
More?     pause
More?     goto menu
More? )
Terminal: ANKIT
Press any key to continue . . .
```

3. Write a shell script which will generate first n Fibonacci numbers like: 1, 1, 2, 3, 5, 8

```
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PS C:\Users\Ankit> $n = Read-Host "Enter the number of terms"
Enter the number of terms: 5
PS C:\Users\Ankit> $a = 0
PS C:\Users\Ankit> $b = 1
PS C:\Users\Ankit> Write-Host "Fibonacci Series:"
Fibonacci Series:
PS C:\Users\Ankit> for ($i = 0; $i -lt $n; $i++) {
>>     Write-Host -NoNewline "$a "
>>     $sum = $a + $b
>>     $a = $b
>>     $b = $sum
>> }
0 1 1 2 3
PS C:\Users\Ankit> Write-Host "" # Adds a new line at the end

PS C:\Users\Ankit> $n = Read-Host "Enter the number of terms"
Enter the number of terms: 10
PS C:\Users\Ankit> $a = 0
PS C:\Users\Ankit> $b = 1
PS C:\Users\Ankit> Write-Host "Fibonacci Series:"
Fibonacci Series:
PS C:\Users\Ankit> for ($i = 0; $i -lt $n; $i++) {
>>     Write-Host -NoNewline "$a "
>>     $sum = $a + $b
>>     $a = $b
>>     $b = $sum
>> }
0 1 1 2 3 5 8 13 21 34
PS C:\Users\Ankit> Write-Host "" # Adds a new line at the end
```

4. Write a shell script which will accept a number n and display first n prime numbers as output

```
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PS C:\Users\Ankit> $n = [int](Read-Host "How many prime numbers?")
How many prime numbers?: 20
PS C:\Users\Ankit> $count = 0
PS C:\Users\Ankit> $num = 2
PS C:\Users\Ankit>
PS C:\Users\Ankit> while ($count -lt $n) {
>>     $isPrime = $true
>>     for ($i = 2; $i -le [math]::Sqrt($num); $i++) {
>>         if ($num % $i -eq 0) {
>>             $isPrime = $false
>>             break
>>         }
>>     }
>>     if ($isPrime) {
>>         Write-Host -NoNewline "$num "
>>         $count++
>>     }
>>     $num++
>> }
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71
PS C:\Users\Ankit>
```

5. Write menu driven program for file handling activity

- Creation of file
  - Write content in the file
  - Append file content
  - Delete file content

```
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PS C:\Users\Ankit> do {
>>     Write-Host "`n1. Create File`n2. Write Content`n3. Append Content`n4. Delete Content`n5. Exit"
>>     $choice = Read-Host "Select an option"
>>     $filename = "test.txt"
>>
>>     switch ($choice) {
>>         1 { New-Item -Path . -Name $filename -ItemType "file" }
>>         2 { $txt = Read-Host "Enter text"; $txt | Out-File $filename }
>>         3 { $txt = Read-Host "Enter text to append"; $txt | Add-Content $filename }
>>         4 { Clear-Content $filename; Write-Host "Content Deleted" }
>>     }
>> } while ($choice -ne 5)

1. Create File
2. Write Content
3. Append Content
4. Delete Content
5. Exit
Select an option: 1
New-Item : The file 'C:\Users\Ankit\test.txt' already exists.
At line:7 char:13
+             1 { New-Item -Path . -Name $filename -ItemType "file" }
+             ~~~~~~
+ CategoryInfo          : WriteError: (C:\Users\Ankit\test.txt:String) [New-Item], IOE
xception
+ FullyQualifiedErrorId : NewItemIOError,Microsoft.PowerShell.Commands.NewItemCommand
```

```
1. Create File
2. Write Content
3. Append Content
4. Delete Content
5. Exit
Select an option: 2
Enter text: My name is ankit

1. Create File
2. Write Content
3. Append Content
4. Delete Content
5. Exit
Select an option: 3
Enter text to append: Hii Ankit

1. Create File
2. Write Content
3. Append Content
4. Delete Content
5. Exit
Select an option: 4
Content Deleted

1. Create File
2. Write Content
3. Append Content
4. Delete Content
5. Exit
Select an option: 5
PS C:\Users\Ankit>
```

