1. Write a shell program to find where a given year is a leap or not

```
#!/bin/bash

read -p "Enter year: " year
isLeapYear=false

if [[ $((year % 4)) = 0 ]]; then
  isLeapYear=true

  if [[ $((year % 100)) = 0 ]]; then
    if [[ $((year % 400)) = 0 ]]; then
      isLeapYear=true
    else
      isLeapYear=false
    fi
  fi
fi

if [[ $isLeapYear = true ]]; then
  echo "$year is a leap year."
else
  echo "$year is not a leap year."
fi
```

Output

```
Enter year: 2025
2025 is not a leap year.
```

2. Greatest among 3 number

```
#!/bin/bash

read -p "Enter number 1: " num1
read -p "Enter number 2: " num2
read -p "Enter number 3: " num3

greatest=$num1

if [[ $num2 > $greatest ]]; then
  greatest=$num2
fi

if [[ $num3 > $greatest ]]; then
  greatest=$num3
fi

echo "Greatest: $greatest"
```

Output

```
Enter number 1: 5
Enter number 2: 7
Enter number 3: 3
Greatest: 7
```

3. Check whether a number is even or not.

```
#!/bin/bash

read -p "Enter number: " num

if [[ $(($num % 2)) = 0 ]]; then
  echo "$num is even."
else
  echo "$num is odd."
fi
```

Output

```
Enter number: 47
47 is odd.
```

4. Check uppercase, lowercase, digit using switch-case

```
!/bin/bash

read -p "Enter a character: " char

case "$char" in
  [A-Z])
    echo "$char is uppercase letter."
    ;;
  [a-z])
    echo "$char is lowercase letter."
    ;;
  [0-9])
    echo "$char is number."
    ;;
  *)
    echo "$char is not a alphanumeric character."
    ;;
esac
```

Output

```
Enter a character: F
F is uppercase letter.
```