Programming
Constructs —
if Selection
Statements

#### 2. Selection Statement

- 1. A selection statement provides for selection between alternatives
- 2. A program can take certain route depending on a situation and selection statements help in choosing between the routes.

# 2. Selection Statement Types

- 1. If statements
- 2. Case Statements
- 3. Pattern Matching

#### If Statements

- 1. if [condition] then action1 fi
- 2. if [condition] then action1 else action2 fi
- 3. if [condition] then action1 elif [condition] then action2 else action3 fi

## if and else Statement

```
#!/bin/bash -x
var1=10
var2=10
if [ $var1 -ge $var2 ]
then
        echo "$var2 is greater than or equal to $var1"
else
        echo "$var2 is less then $var1"
fi
iftest.sh (END)
Narayans-MacBook-Pro:TerminalCommands narayan$ ./iftest.sh
+ var1=10
+ var2=10
+ '[' 10 -ge 10 ']'
+ echo '10 is greater than or equal to 10'
10 is greater than or equal to 10
```

## Execution Thread of a Employee Wage Example



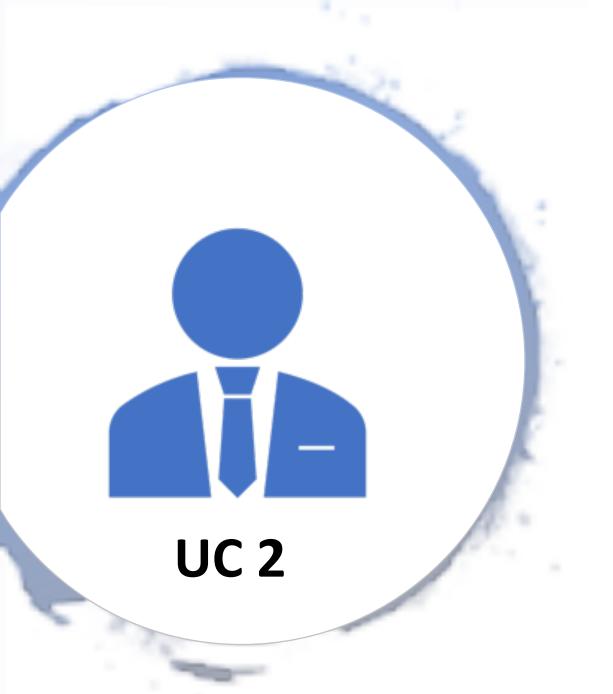


Check Employee is Present or Absent

# Check Employee is Present or Abscent

```
#!/bin/bash -x
isPresent=1;
randomCheck=$((RANDOM%2));
if [ $isPresent -eq $randomCheck ];
then
        echo "Employee is Present";
else
        echo "Employee is Abscent";
```

```
+ isPresent=1
+ randomCheck=0
+ '[' 1 -eq 0 ']'
+ echo 'Employee is Abscent'
Employee is Abscent
```



Calculate Daily Employee Wage

# Calculating Employee Wage

```
#!/bin/bash -x
isPresent=1;
randomCheck=$((RANDOM%2));
if [ $isPresent -eq $randomCheck ];
then
        empRatePerHr=20;
        empHrs=8;
        salary=$(($empHrs*$empRatePerHr));
else
   salary=0;
```

```
+ isPresent=1
+ randomCheck=1
+ '[' 1 -eq 1 ']'
+ empRatePerHr=20
+ empHrs=8
+ salary=160
```

### Selection Practice Problems with if & else

- 1. Write a program that reads 5 Random 3 Digit values and then outputs the minimum and the maximum value
- 2. Write a program that takes day and month from the command line and prints true if day of month is between March 20 and June 20, false otherwise.
- 3. Write a program that takes a year as input and outputs the Year is a Leap Year or not a Leap Year. A Leap Year checks for 4 Digit Number, Divisible by 4 and not 100 unless divisible by 400.
- 4. Write a program to simulate a coin flip and print out "Heads" or "Tails" accordingly.

# Thank You