Programming Constructs – case 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

Case Statements

```
case expression in
   pattern1 )
      statements ;;
   pattern2 )
      statements ;;
esac
```

case statements

```
#!/bin/bash
for filename in $(ls)
do
   # Take extension available in a filename
   ext=${filename##*\.}
   case "$ext" in
      java) echo "$filename : Java source file"
            ;;
      o)    echo "$filename : Object file"
            ;;
      sh)   echo "$filename : Shell script"
            ;;
      txt)  echo "$filename : Text file"
            ;;
      *)    echo " $filename : Not processed"
            ;;
   esac
done
casefiletype.sh (END)
```

```
Narayans-MacBook-Pro:test narayan$ ./casefiletype.sh
Helloworld.java : Java source file
abc.txt : Text file
casefiletype.sh : Shell script
hello.sh : Shell script
```

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Solving using Case Statement

Employee Wage using Case Statement

```
#!/bin/bash -x
isPartTime=1;
isFullTime=2;
empRatePerHr=20;
empCheck=$((RANDOM%3));

case $empCheck in
        $isFullTime)
                empHrs=8
                ;;
        $isPartTime)
                empHrs=4
                ;;
        *)
        empHrs=0
                ;;
esac

salary=$(($empHrs*$empRatePerHr));
empWageCase.sh (END)
```

```
+ isPartTime=1
+ isFullTime=2
+ empRatePerHr=20
+ empCheck=0
+ case $empCheck in
+ empHrs=0
+ salary=0
```

Compare if & Case Execution Statement

If Execution

```
+ isPartTime=1
+ isFullTime=2
+ empRatePerHr=20
+ randomCheck=0
+ '[' 2 -eq 0 ']'
+ '[' 1 -eq 0 ']'
+ empHrs=0
+ salary=0
```

Case Execution

```
+ isPartTime=1
+ isFullTime=2
+ empRatePerHr=20
+ empCheck=0
+ case $empCheck in
+ empHrs=0
+ salary=0
```

Selection Practice Problems with case stattement

1. Read a single digit number and write the number in word using Case
2. Read a Number and Display the week day (Sunday, Monday,…)
3. Read a Number 1, 10, 100, 1000, etc and display unit, ten, hundred,…
4. Write a program that takes User Inputs and does Unit Conversion of different Length units
    1. Feet to Inch
    2. Feet to Meter
    3. Inch to Feet
    4. Meter to Feet

Thank You