Date: 29-5-2020

Morning Session: 9 am – 11 PM

By ~ Sundeep Charan Ramkumar Today

Topics: Statements

Statement vs Expression

If you can print it, or assign it to a variable, it's an **expression**. If you can't, it's a **statement.**

Statement : 5 > 6

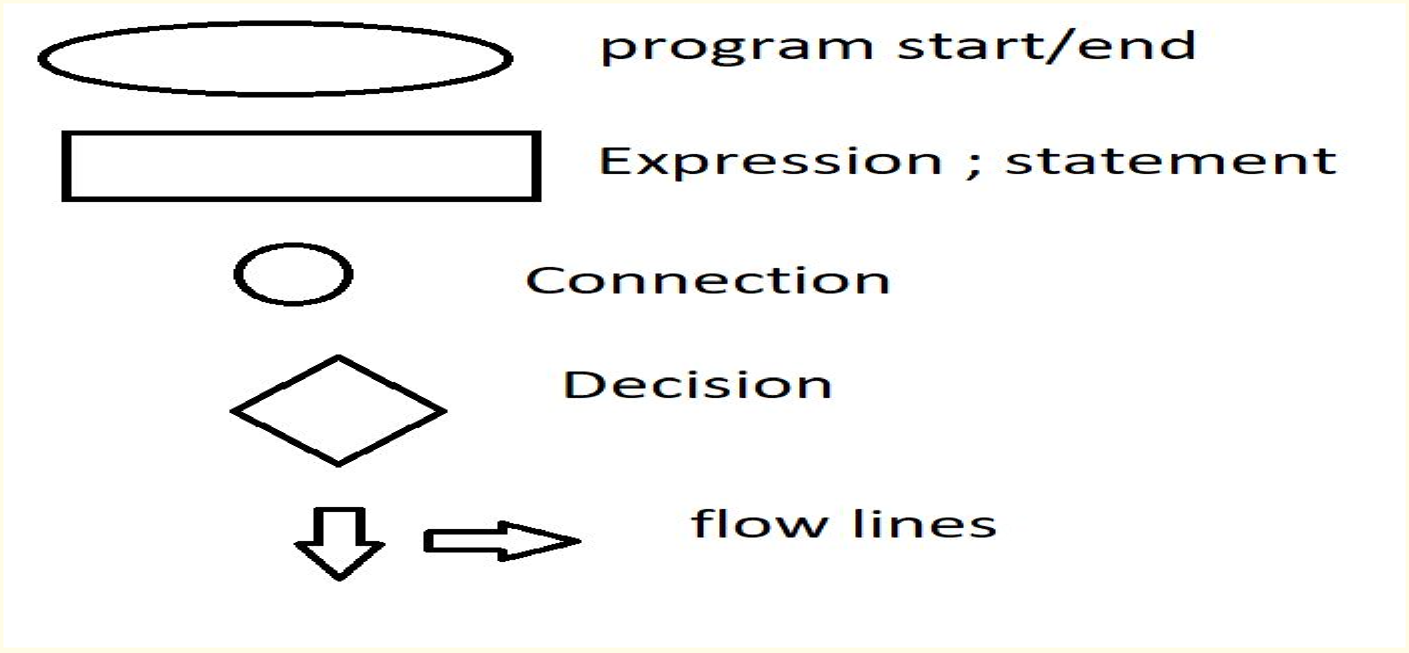
Expression: Spit Output (document.write(), Console.log().) , get Input (prompt()).

Two types of statements:

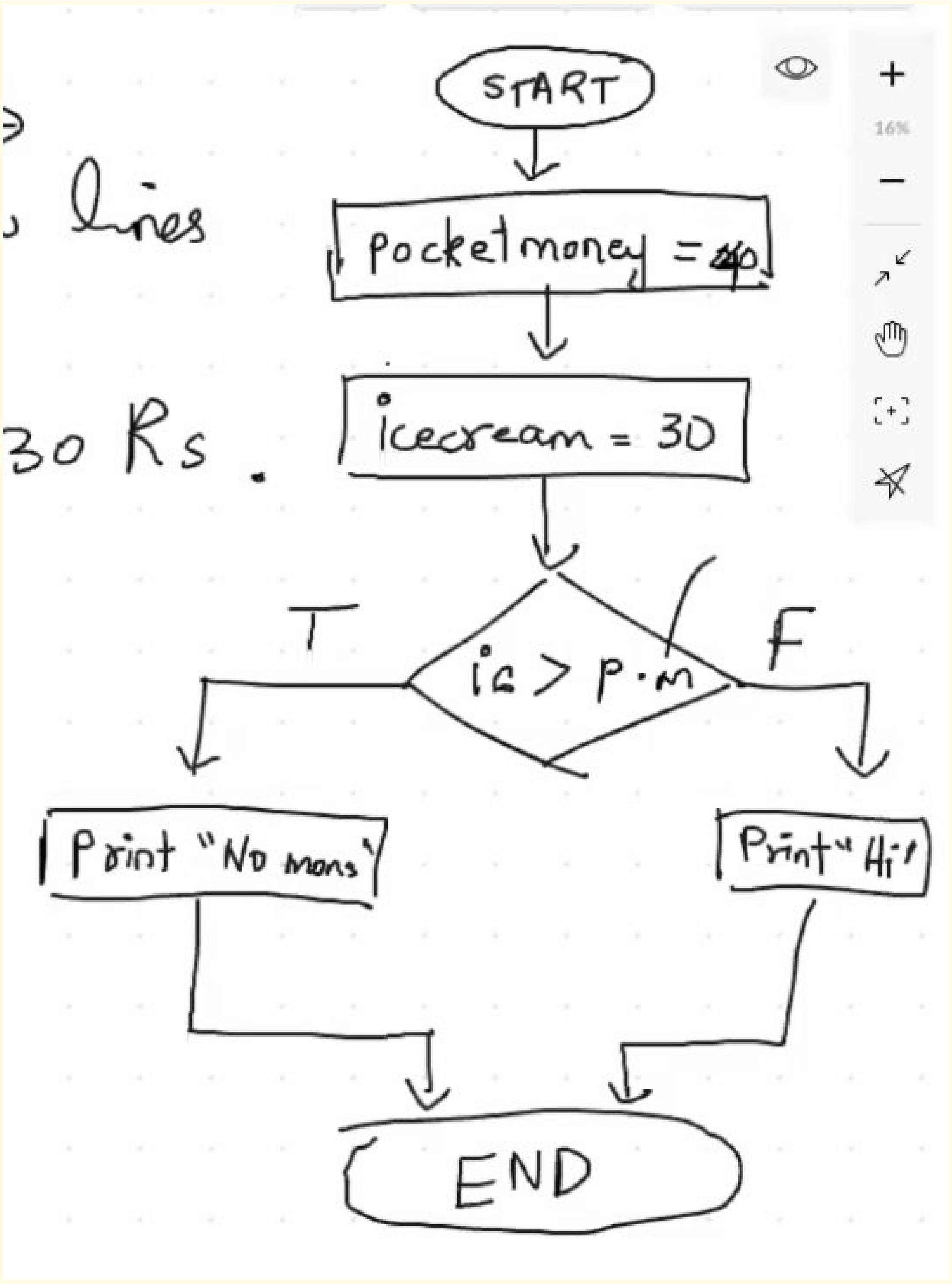
- Conditional Statements
- Iterative statements

1) **Conditional Statements:** The conditional statements included in the JavaScript code assist with decision making, based on certain conditions. The condition specified in the conditional statement can either be true or false. The conditional statements execute the associated piece of code only if the condition is true

Flow Chart :

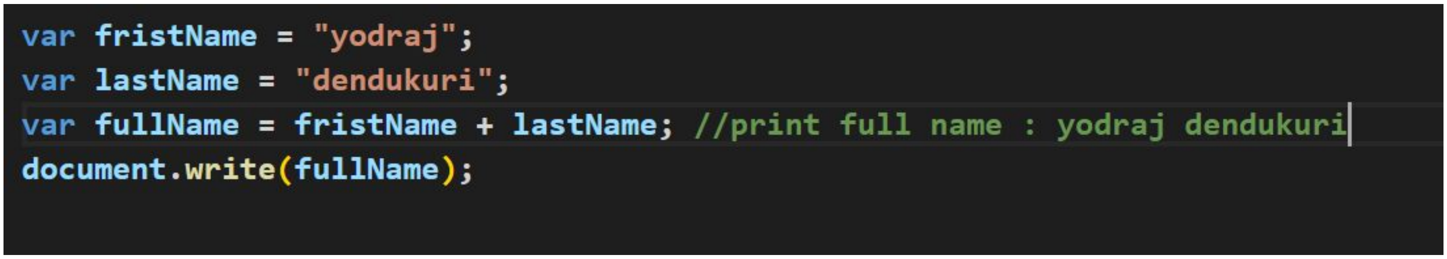


1) You have 20Rs , Icecream costs 30 Rs .



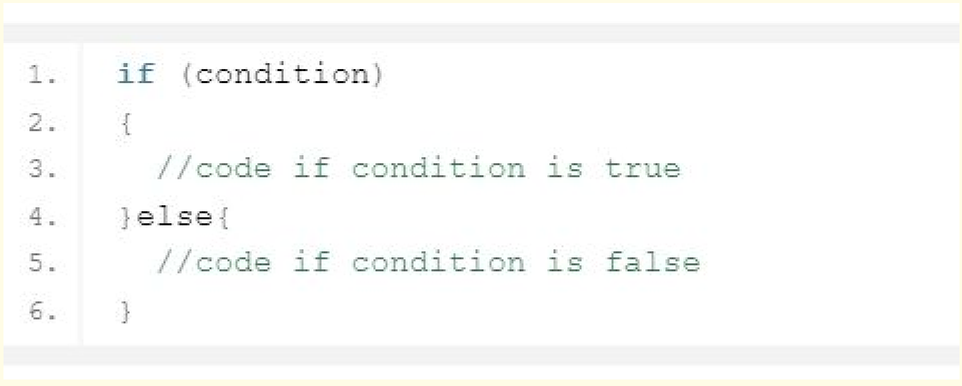
Keywords : **Keywords are reserved words in JavaScript that you cannot use to indicate variable labels or function names.**

Naming Convention : camel case convention, typing the words in lower-case, only capitalizing the first letter in each word.

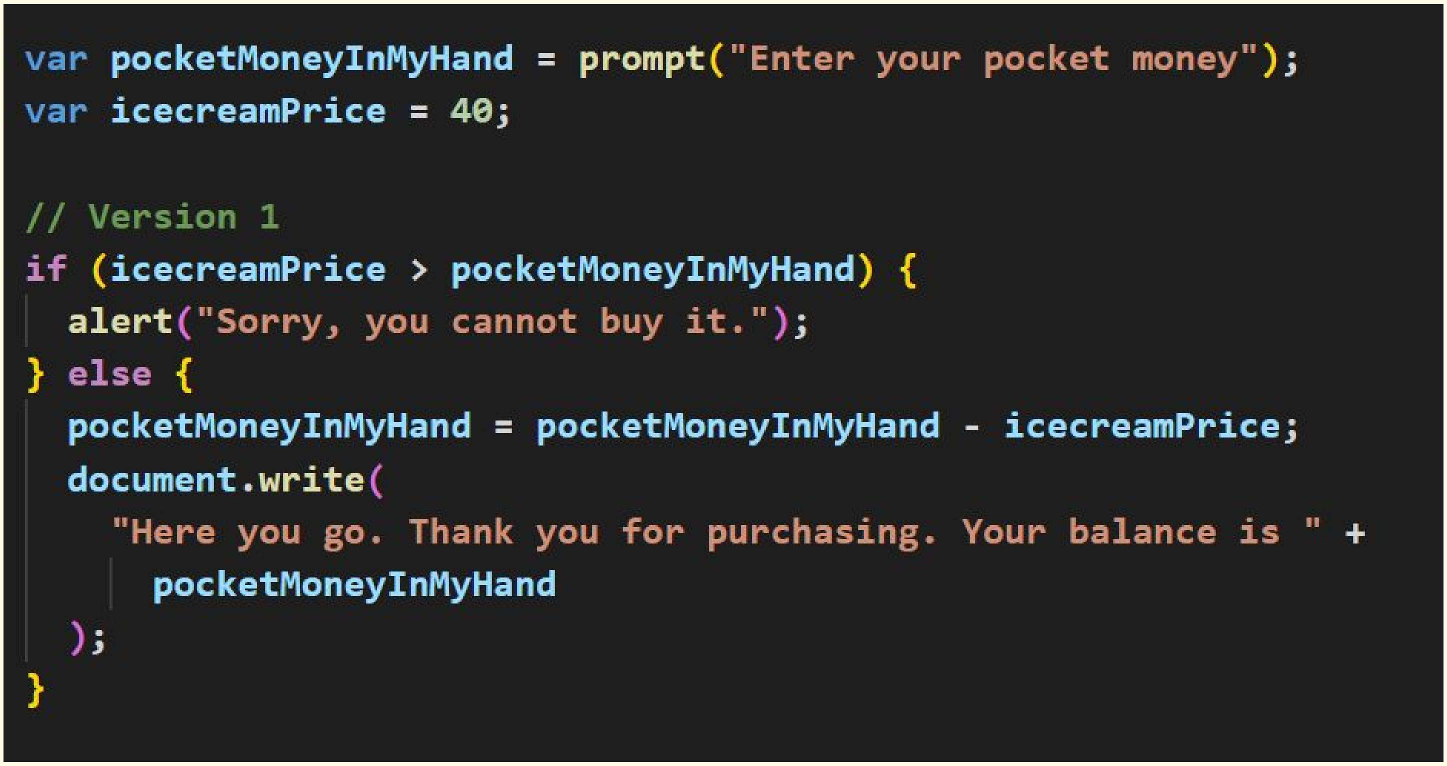


```
var fristName = "yodraj";
var lastName = "dendukuri";
var fullName = fristName + lastName; //print full name : yodraj dendukuri
document.write(fullName);
```

If Statement :



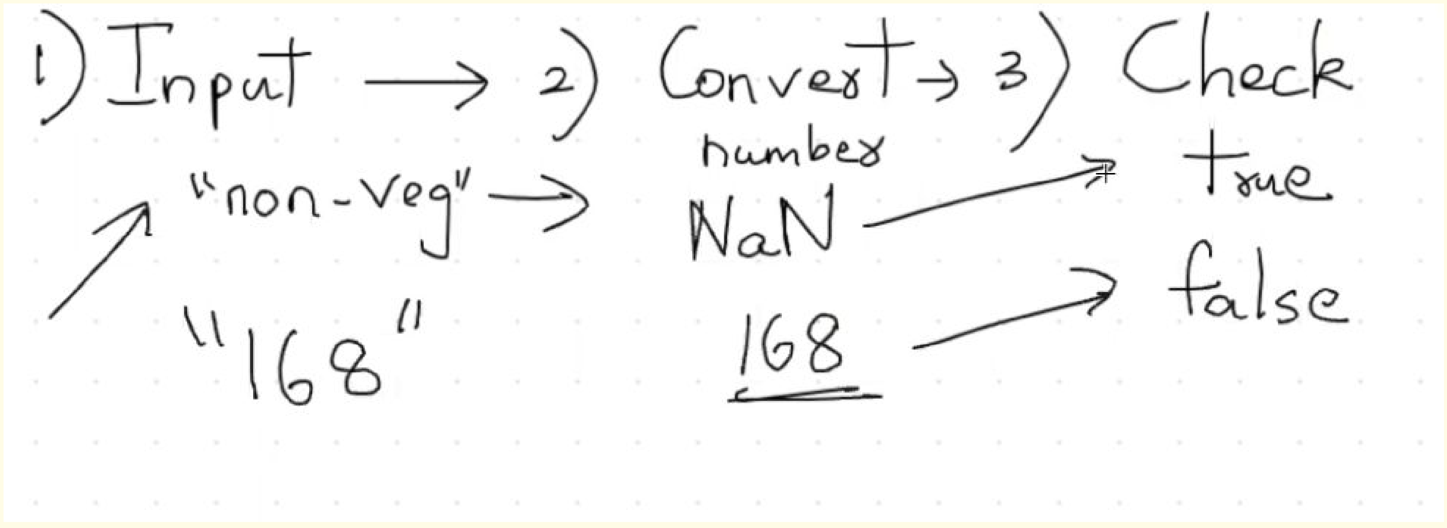
```
if (condition)
{
  //code if condition is true
}else{
  //code if condition is false
}
```

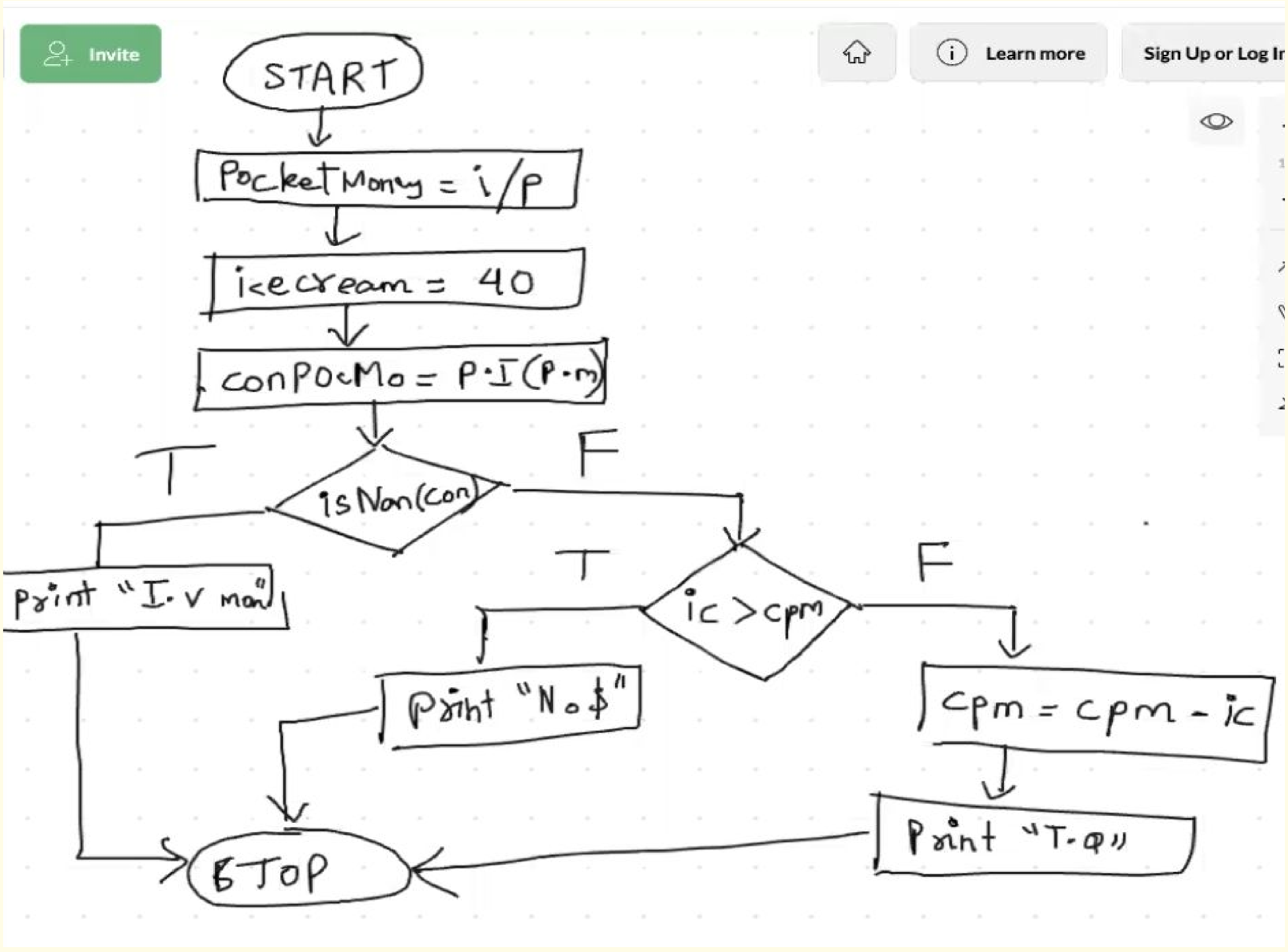


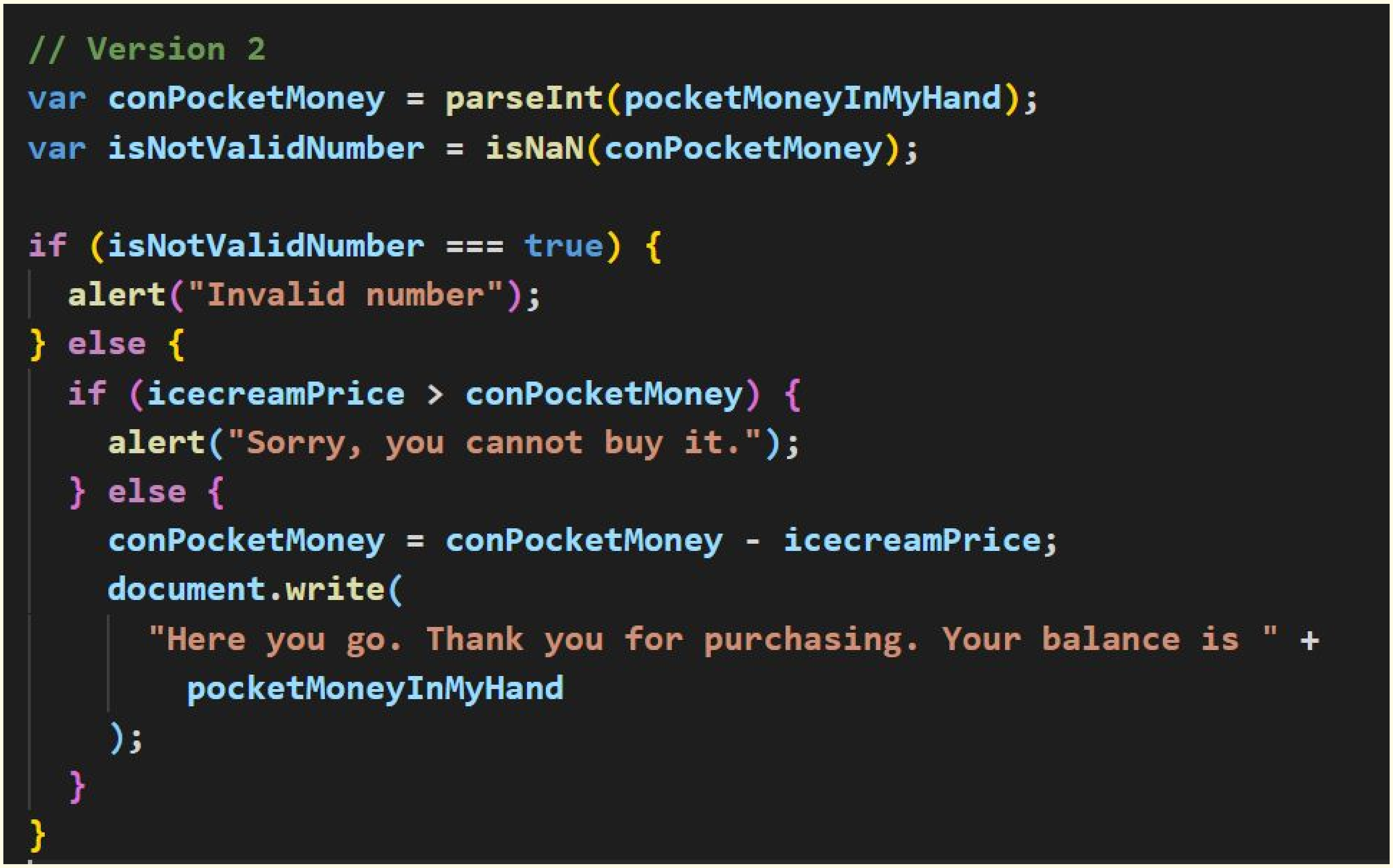
```
var pocketMoneyInMyHand = prompt("Enter your pocket money");
var icecreamPrice = 40;

// Version 1
if (icecreamPrice > pocketMoneyInMyHand) {
  alert("Sorry, you cannot buy it.");
} else {
  pocketMoneyInMyHand = pocketMoneyInMyHand - icecreamPrice;
  document.write(
    "Here you go. Thank you for purchasing. Your balance is " +
      pocketMoneyInMyHand
  );
}
```

If You enter Not A Valid Number NaN = Not A Number

Nested Conditions:



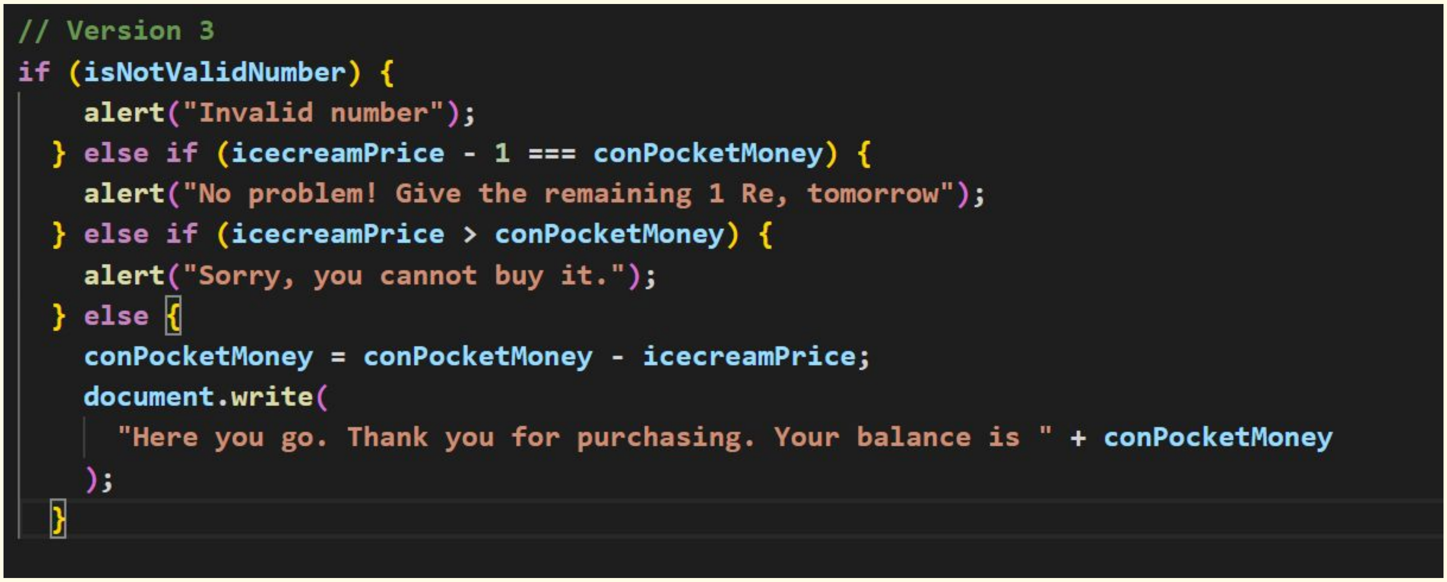




```
// Version 2
var conPocketMoney = parseInt(pocketMoneyInMyHand);
var isNotValidNumber = isNaN(conPocketMoney);

if (isNotValidNumber === true) {
  alert("Invalid number");
} else {
  if (icecreamPrice > conPocketMoney) {
    alert("Sorry, you cannot buy it.");
  } else {
    conPocketMoney = conPocketMoney - icecreamPrice;
    document.write(
      "Here you go. Thank you for purchasing. Your balance is " +
        pocketMoneyInMyHand
    );
  }
}
```

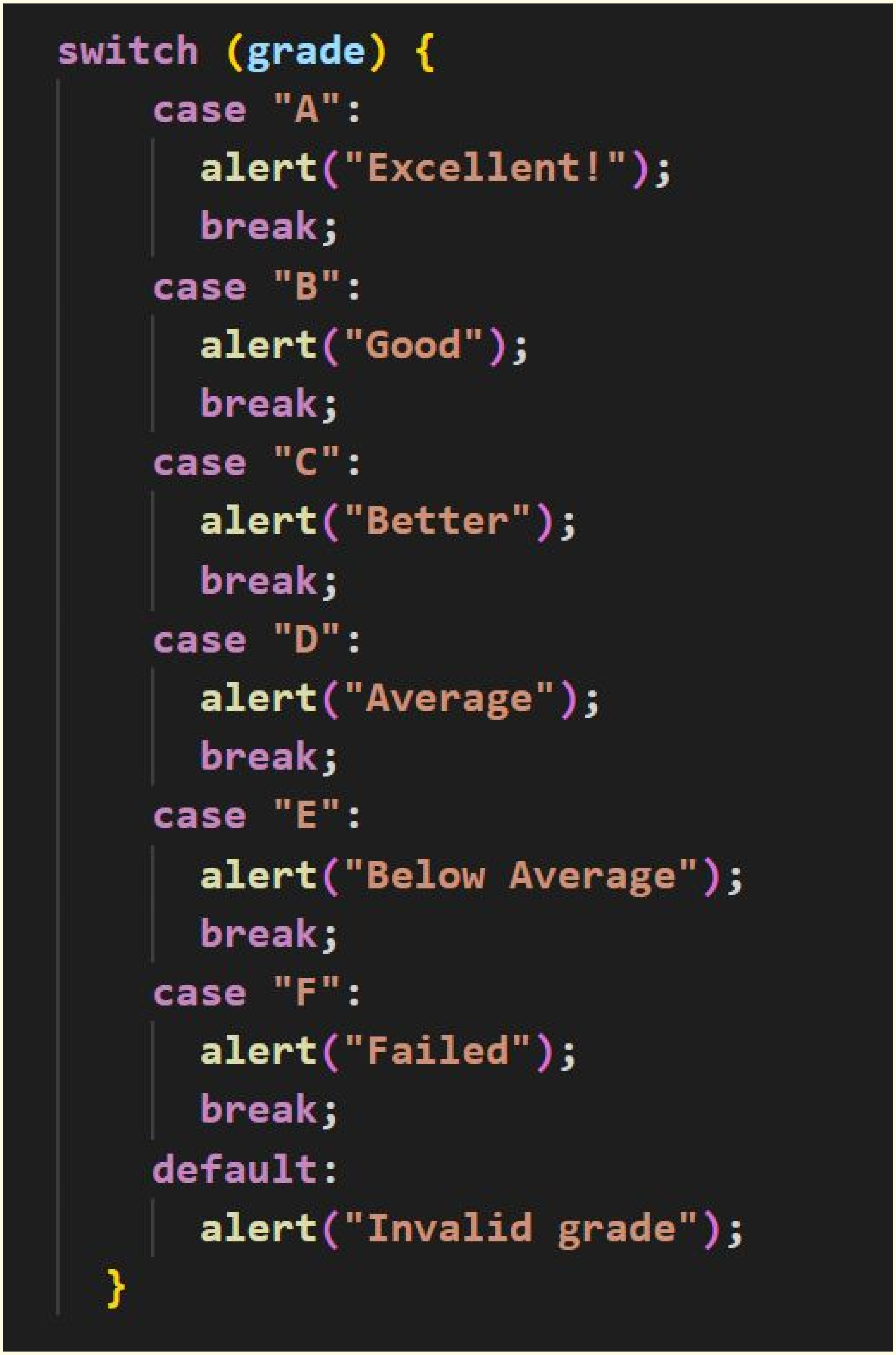
Linear based checking:

Else if: to use multiple conditions



```
// Version 3
if (isNotValidNumber) {
    alert("Invalid number");
  } else if (icecreamPrice - 1 === conPocketMoney) {
    alert("No problem! Give the remaining 1 Re, tomorrow");
  } else if (icecreamPrice > conPocketMoney) {
    alert("Sorry, you cannot buy it.");
  } else {
    conPocketMoney = conPocketMoney - icecreamPrice;
    document.write(
      "Here you go. Thank you for purchasing. Your balance is " + conPocketMoney
    );
  }
```

Switch case: to execute code with specific conditions (conditions more than 3 we can use switch) (ex: evaluate marks grade)We use the keywords **switch, case, and break** for these statements. The condition of whichever case is true, that block executes.



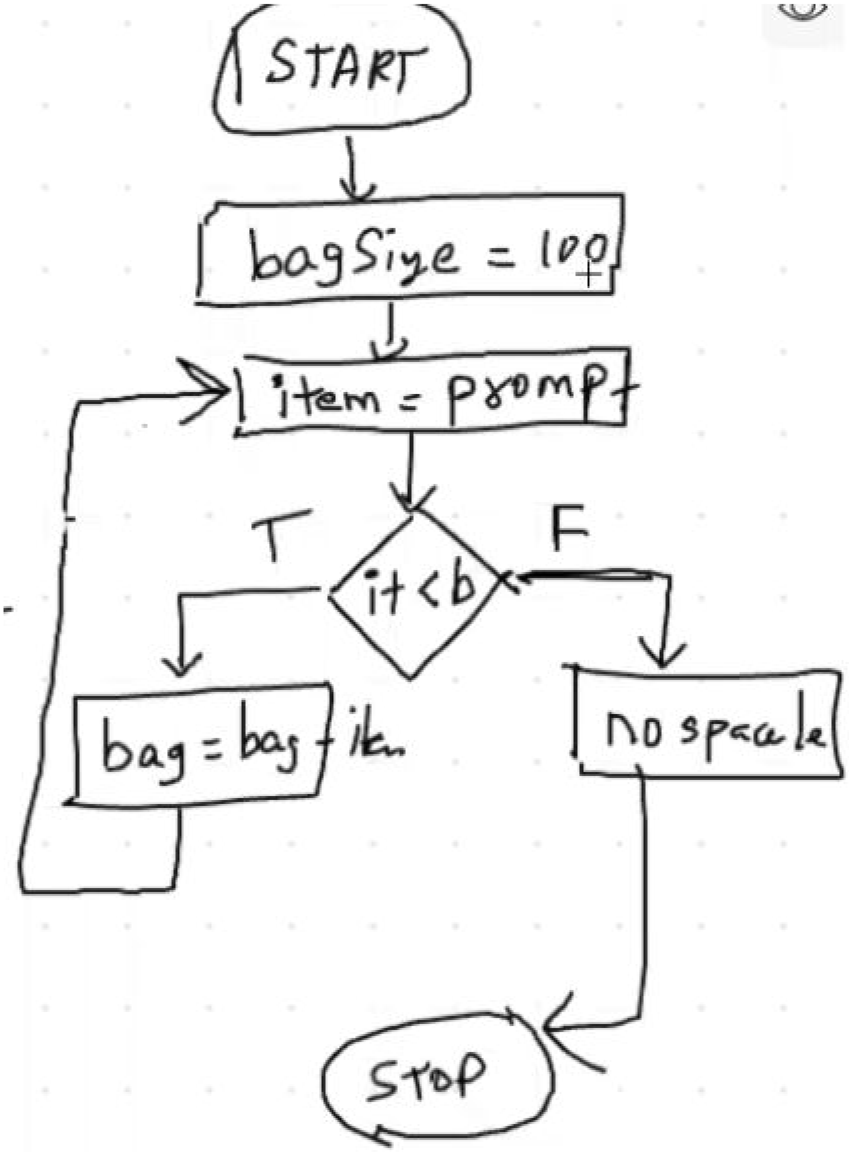
```
switch (grade) {
    case "A":
      alert("Excellent!");
      break;
    case "B":
      alert("Good");
      break;
    case "C":
      alert("Better");
      break;
    case "D":
      alert("Average");
      break;
    case "E":
      alert("Below Average");
      break;
    case "F":
      alert("Failed");
      break;
    default:
      alert("Invalid grade");
  }
```

2. Iterative Statements:

We often need to repeat actions. *Loops* are a way to repeat the same code multiple times. Untill false

Entry check: (For , While)
Exit Check (Do while)

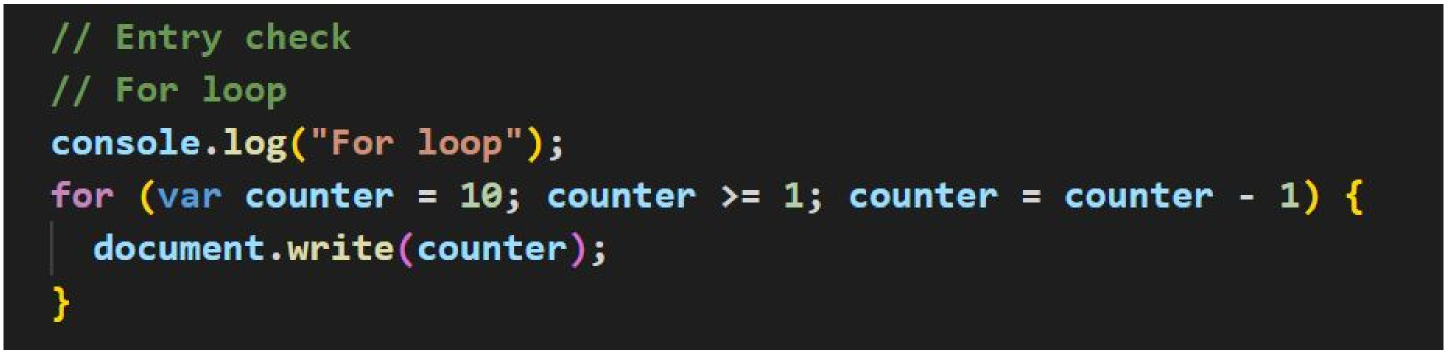
For loop:



Syntax: for (declaration, Condition , Update (increment or decrement) {

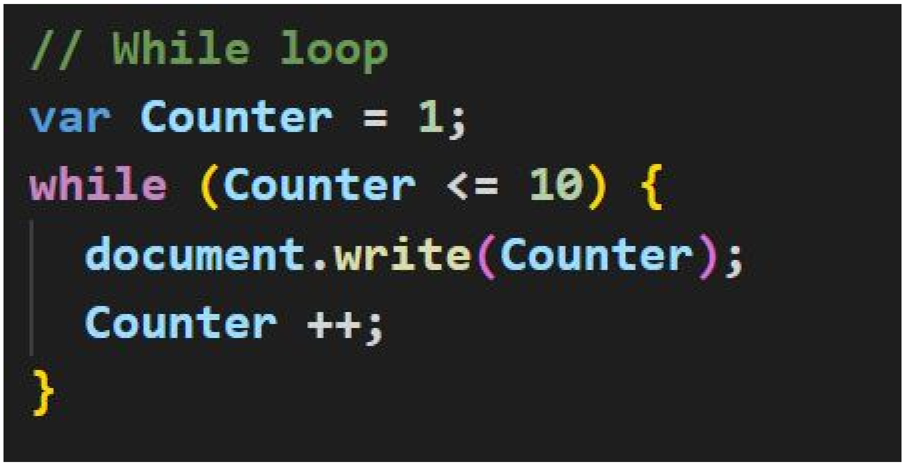
//Statement

}



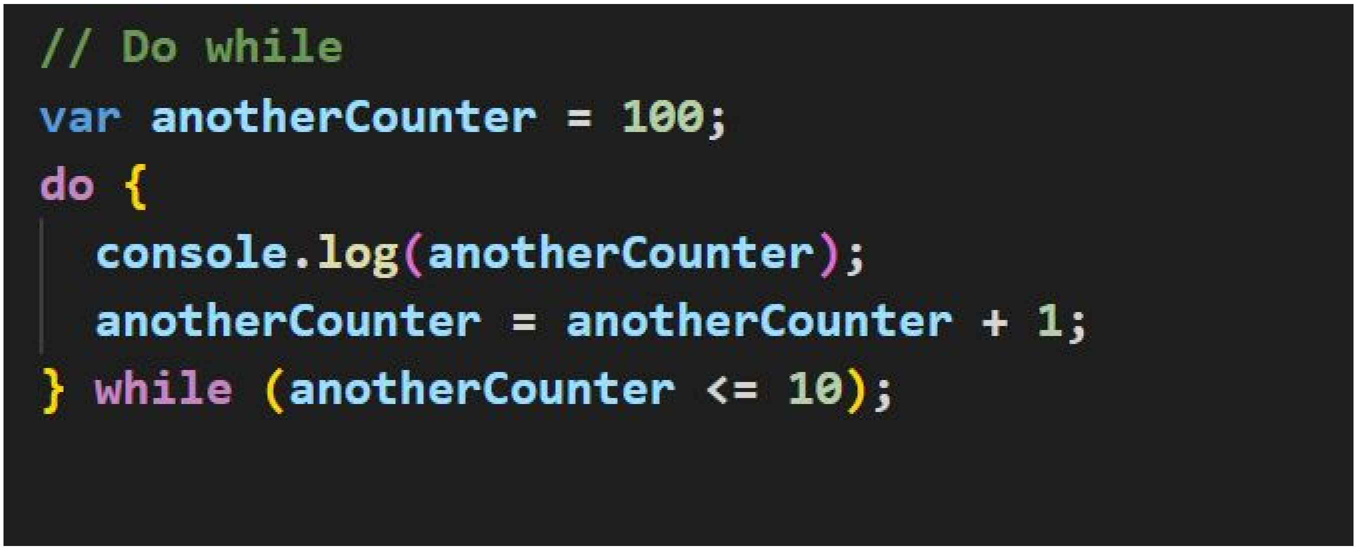
```
// Entry check
// For loop
console.log("For loop");
for (var counter = 10; counter >= 1; counter = counter - 1) {
  document.write(counter);
}
```

While : **check condition then evaluate,** **may not even run once**



```
// While loop
var Counter = 1;
while (Counter <= 10) {
  document.write(Counter);
  Counter ++;
}
```

Do while : **evaluate then check the condition , at least runs once...**



```
// Do while
var anotherCounter = 100;
do {
  console.log(anotherCounter);
  anotherCounter = anotherCounter + 1;
} while (anotherCounter <= 10);
```