(062-303) WK 09

03 FRIDAY • MARCH

1) dryrun
2) Algorithm

2023 - FEBRUARY

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5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

4th * conditional statement * 12/05/23

~~(2.50hr)~~

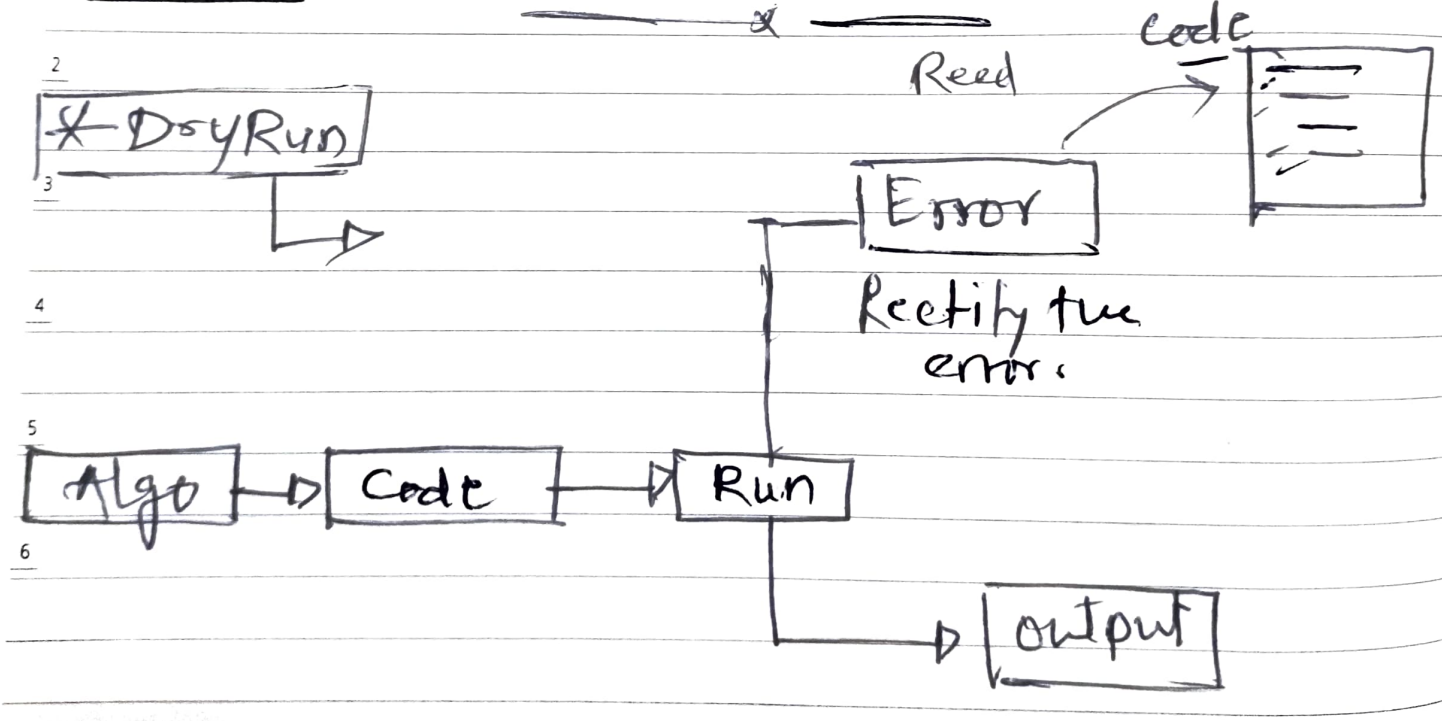
(2.50hr)

* Algorithm (steps)

Step1 :- Declare ~~and~~ variables and assign value.

step2 :- Declare a variable result and assign the product tait.

step3 :- print the result.



Dryrun: means read the code line by line and where it is

↳ Think that you guys are the compiler and run the code manually on the notebook

conditional statements.

↳ If you want to run a code based on some cond^n then we use conditional statment.

statments

(1) If statement

syntax :-

passed (true)

```
if (condition) {
    // code
}
```

→ code written inside the conditional statement will run based on some boolean outcome only.

→ * The code Run only when the condition is passed (true) the code will run.

→ * The code written inside the if condition will only run if the cond^n is true.

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→ The code written inside the if conditional statement will run only when the outcome of cond^n is true.

Ex:-1.

```
console.log("code start")

if (true) {
// false   console.log("I am if conditional
                        statement");
        }

Console.log("Code end");
```

output (true)

Code start

I am if conditional statement

Code end.

(false)

Code start

Code end.

(2) if - else statement

Syntax

```
if(condition){
  // code
}else{
  // code
}
```

- code inside "if" will run when the condn is true.
- code inside the else will run when if is not running

Two pb:
→ Compiler will check every if condn

(3) if - .. elseif .... else statement

↳ It is used in multiple condn.

Ex:- simulate traffic signal

```
Let light = "green";
if (light == "red"){
  console.log("stop");
}else if(light == "yellow"){
  console.log("Be ready");
}else if(light == "green"){
  console.log("Go");
}else{
  console.log("traffic lights not working properly");
}
```

Output

Go!

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Ex:

```
let light = "Black";
if (light == "red"){
    console.log("stop");
} else if (light == "yellow"){
    console.log("Be ready / wait");
} else if (light == "Green") {
    console.log("Go!");
} else {
    console.log("Traffic signals are not working");
}
```

Output

Traffic signals are not working

Syntax

```
if (con1) {
    // code1
} else if (cond^n 2) {
    // code 2
} else if (cond 3) {
    // con 3
} else {
    code 4
}
```

Note:- ~~If~~ Onee any cond^n is true, it will print if and forget about everything else.

Ex: If the bill is more than 500, give discount of 10%. If the bill is more than 1000, give a discount of 20% and in all other case no discount.

```
let bill = 1200;

if (bill >= 1000) {
    console.log("20% discount");
} else if (bill >= 500) {
    console.log("10% discount");
} else {
    console.log("no discount");
}
```

Ex: If the number is divisible by 3, print a "multiple of 3".

⇒ Let number = 20;

```
if (number%3==0) {
    console.log("Multiple of 3");
} else {
    console.log("not a multiple
}
```

Output: not a multiple

Ex: If a person is allowed to drive in India print "Apply for a license" or NA

⇒ Let age = 22

```
if (age >= 18) {
    console.log("Apply for a license");
} else {
    console.log("NA");
}
```

Ex:- Given 2 numbers a and b print which is greater or "both equal".

⇒ Let a = 10;

let b = 22;

```
if (a > b) {
    console.log(a, "is bigger");
} else if (b > a) {
    console.log(b, "is bigger");
} else {
    console.log("both are equal");
}
```

Ex:- Given stored username and password and input username and password, print if the user can login or not

⇒

```
let email = "abc@gmail.com";
let pass = "abcd";

let input_email = "abc@gmail.com";
let input_pass = "1234";
```

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APRIL

M	T	W
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17	18	19
24	25	26

nested conditional statement

```
if(email == input_email){
    if(pass == input_pass){
        console.log("Login successful");
    } else{
        console.log("password wrong");
    }
} else{
    Console.log("Email is wrong");
}
```

* Logical operators, switch

↳ work on Boolean datatype

→ Input should be of boolean type.

→ output is also boolean datatype.

↳ Logical oper is symbol which is used to connect two or more boolean Exp and give output as Boolean data type.

* Types of Logical operators

① logical AND (&&) ← symbol

② Logical OR (||)

③ Logical NOT (!)

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① AND operator (&&)

↳ In case of AND, even if one of the input is false, the whole outcome is false.

② OR operator (||)