Rachid Bodson Homework 4

2. main calls fun1; fun1 calls fun2; fun2 calls fun3.

d,e,f declared in fun3…..c declared in fun2…..b declared in fun1…..a declared in main.

1. main calls fun1; fun1 calls fun3.

d,e,f declared in fun3…..b,c declared in fun1…..a declared in main.

1. main calls fun2; fun2 calls fun3; fun3 calls fun1.

b,c,d declared in fun1…..e,f declared in fun3…..a declared in main.

1. main calls fun3; fun3 calls fun1.

b,c,d declared in fun1…..e,f declared in fun3…..a declared in main.

1. main calls fun1; fun1 calls fun3; fun3 calls fun2.

c,d,e declared in fun2…..f declared in fun3…..b declared in fun1…..a declared in main.

1. main calls fun3; fun3 calls fun2; fun2 calls fun1.

b,c,d declared in fun1…..e declared in fun2…..f declared in fun3…..a declared in main.

1. Subprograms with javascript
2. function func(){
3. var a,b,c;
4. a=10;
5. b=5;
6. c=a+b;
7. console.log(c);
9. function func1(){
10. var d;
11. d = b+c;
12. console.log(d);
13. function func2(){
14. var e;
15. e=c+d;
16. console.log(e);
18. }
19. func2(); // called by func1
20. }
21. func1(); //called by func
22. }
23. func();

output:

[Running] node "/Users/rachi1/FIrst VScode/Subprograms.js"

15

20

35

[Done] exited with code=0 in 0.246 seconds

3. Subprograms with python

def sub1():

a=5

b=5

c=a+b

print(c)

def sub2():

sub1() #sub1 called by sub2

b=10

c=10

d=b+c

print(d)

def sub3():

sub2() # sub2 called by sub3

c=15

d=15

e=c+d

print(e)

if \_\_name\_\_ == '\_\_main\_\_':

sub3() #sub3 called by main

output:

[Running] python -u "/Users/rachi1/FIrst VScode/Subprograms.py"

10

20

30

[Done] exited with code=0 in 0.036 seconds

4. EBNF for while

<while\_stmt> -> WHILE “(“<boolexpr>”)” <statement>

<block> <block> -> <stmt> | ‘{‘ <stmt> {<stmt>} ‘}’

Void while\_stmt () {

If(nextToken = CODE){

lex();

} else { error;

If( nextToken = LEFT\_PAREN){

lex();

} else { error ;

If (nextToken = RIGHT\_PAREN){

lex();

statement();

} else { error;

}

}

}

}