1. Review the lecture slides which discuss Very Simple Programming Languages (VSPL).

Next, observe the VSPL defined below and identify which sequences are valid.

<letter> ::= a | b | c | d | e

<LETTER> ::= V | W | X | Y | Z

<number> ::= 0 | 1 | 2 | 3 | 4

<letters> ::= <letter> | <letter> <letters>

<LETTERS> ::= <LETTER> | <LETTER> <LETTERS>

<numbers> ::= <number> | <number> <numbers>

<sequence> ::= <letters> <LETTERS> <numbers> | <LETTERS> <letters> <numbers>

Which of the following are valid sequences? You must clearly identify for each of the

following sequences, which are valid, and which are invalid. Each sequence is worth 1 point.

Submit your answer as hw02q1.pdf. [10 points]

1. CSE204 **NO**

2. ebcXYZ125 **YES**

3. XYZcde344 **YES**

4. VWXa10 **YES**

5. edc135790Z **NO**

6. dYaZeWkV **NO**

7. Zbad00 **YES**

8. aZ21 **YES**

9. XYZabc23 **YES**

10. Ey701 **YES**

**Q2**

Int subf(inta, intb) {

Return a-b;

}

#define subm(a,b)(a-b)

Int cubef(inta) {

Return a\* a\* a;

}

#define cubem(a)(a\*a\*a)

Int minf(inta, intb) {

if(a<=b) {

return a;

}

else{

return b;

}

}

#define minm(a,b)((a<=b)?a:b)

Int oddf(inta) {

if(a% 2 == 1) {

return 1;

}

else{

return0;

}

#define oddm(a)(( a% 2 == 1)?1:0)

#define subm(a,b)(a-b)

#define cubem(a)(a\*a\*a)

#define minm(a,b)((a<=b)?a:b)

#define oddm(a)(( a% 2 == 1)?1:0)

**b)**

**#include <stdio.h>**

**#define subm(a,b)(a-b)**

**#define cubem(a)(a\*a\*a)**

**#define minm(a,b)((a<=b)?a:b)**

**#define oddm(a)(( a% 2 == 1)?1:0)**

**int subf(inta, intb) {**

**return a-b;**

**}**

**int cubef(inta) {**

**return a\* a\* a;**

**}**

**int minf(inta, intb) {**

**if(a<=b) {**

**return a;**

**}**

**else{**

**return b;**

**}**

**}**

**int oddf(inta) {**

**if(a% 2 == 1) {**

**return 1;**

**}**

**else{**

**return0;**

**}**

**}**

**void main() {**

**a = 3, b = 6;**

**subf(a, b);**

**subm(a, b);**

**subf(a++, b--);**

**a = 3; b = 6; // reset a,b values**

**subm(a++, b--);**

**a = 3; b = 6;**

**cubef(a);**

**cubem(a);**

**cubef(--a);**

**a = 3; b = 6;**

**cubem(--a);**

**a = 3; b = 6;**

**minf(a, b);**

**minm(a, b);**

**minf(--a, --b);**

**a = 3; b = 6;**

**minm(--a, --b);**

**a = 2; b = 6;**

**oddf(a);**

**oddm(a);**

**oddf(a++);**

**a = 2; b = 6;**

**oddm(a++);**

**}**