**Cycle 3**

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CS7B – Roll No :31

**Question 3**

Construct a recursive descent parser for an expression.

Program :

#include<stdio.h>

char input[100];

int i = 0;

int curr = 0;

int E();

int Z();

int main() {

printf("Enter input:\n");

scanf("%s", input);

while(input[i] != '\0')

i++;

// i contains length of the input.

int res = E();

if(res == 1 && curr == i)

printf("Input has been accepted.\n");

else

printf("Input has been rejected.\n");

}

int E() {

int res;

// E -> iZ

if(input[curr] == 'i') {

curr++;

res = Z();

if(res == 1)

return 1;

else

return -1;

}

}

int Z() {

int res;

// Z -> +iZ

if(input[curr] == '+' && input[curr + 1] == 'i') {

curr += 2;

res = Z();

if(res == 1)

return 1;

}

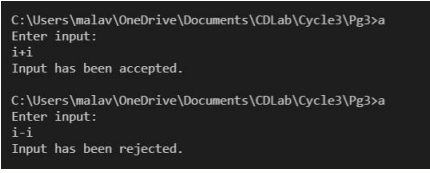
//Z -> e

//not incrementing curr

return 1;

}

Output:

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