9. Write a program to implement code generation algorithm for given input string(Implement the program in Python)

#include<stdio.h>

#include<string.h>

#include<conio.h>

#include<ctype.h>

void main( )

{

char a[20];

int i,j=0;

FILE \*fp;

if(( fp = fopen("z.dat", "r")) != 0)

{

while(fscanf(fp,"%s", a) != EOF)

{

i=0;

if( strlen(a)==6)

{

i=i+3;

if(islower(a[i]))

printf("lw $t%d, (%c)\n", j++,a[i]);

else

{

for(i=3;i < strlen(a);i++)

{

if(isdigit(a[i]))

{

x= a[i] - '0';

k=k\*10 +x;

}

}

printf("li $t%d, %d\n", j,k);

}

i=i+2;

if(islower( a[i]))

printf("lw $t%d, (%c)\n", j++,a[i]);

else

{

for(i=3;i < strlen(a);i++)

{

if(isdigit(a[i]))

{

x= a[i] - '0';

k=k\*10 +x;

}

}

printf("li $t%d, %d\n", j,k);

}

i=i-1;

if(a[i] == '+')

printf("add $t%d, $t%d, $t%d\n", j,j-1,j-2);

else if( a[i] == '-')

printf("sub $t%d, $t%d, $t%d\n", j,j-2,j-1);

else if( a[i] == '\*')

printf("mul $t%d, $t%d, $t%d\n", j,j-2,j-1);

else if( a[i] == '/')

printf("div $t%d, $t%d, $t%d\n", j,j-2,j-1);

}

else if(strlen(a)==4)

{

i=i+3;

if( islower(a[i]))

{

printf("lw $t%d, %c\n",j,a[i]);

printf("copy %c, $t%d\n", a[i-3],j);

}

else

printf("li $t%d, %c\n",j,a[i]);

}

j=j+1;

} } }