Universidad Nacional Autónoma de México
Facultad de Estudios Superiores Aragón

Ingeniería en Computación
COMPILADORES
Grupo:2608

Profesor: Pérez Medel Marcelo

TAREA 4

Generar el código intermedio

Generar el ensamblador de una dirección

Alumna: Cruz Cervantes Guadalupe Sugeily

LDA- Carga

ADD- Suma

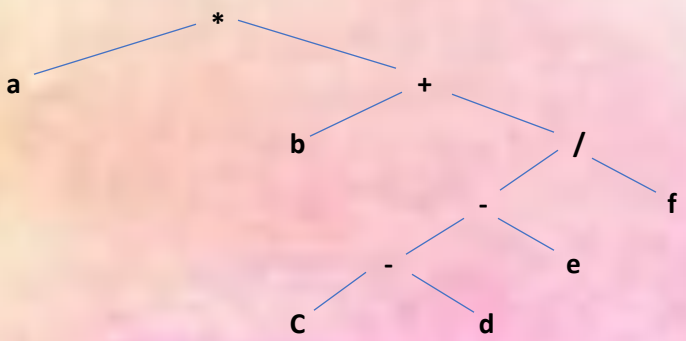
SUB- Resta

MUL- Multiplicacion

DIV- Division

STA- Toma

11.- a*(b+(c-d-e)/f)



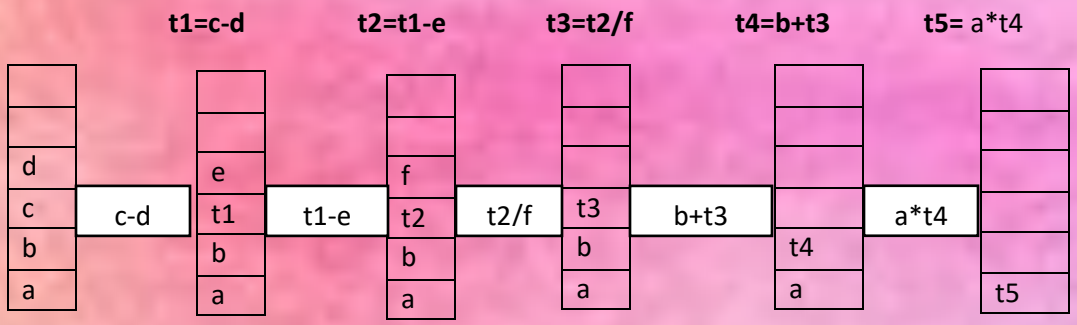
Prefija

* a + b / - - c d e f

Postfija

a b c d - e - f / + *

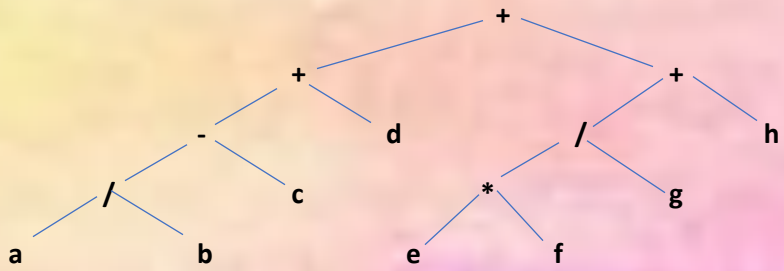
Código Intermedio



Código Ensamblador

LDA c;
SUB d;
STA t1;
LDA t1;
SUB e;
STA t2;
LDA t2;
DIV f;
STA t3;
LDA b;
ADD t3;
STA t4;
LDA a;
MUL t4;
STA t5;

12.- a/b-c+d+(e*f/g+h)



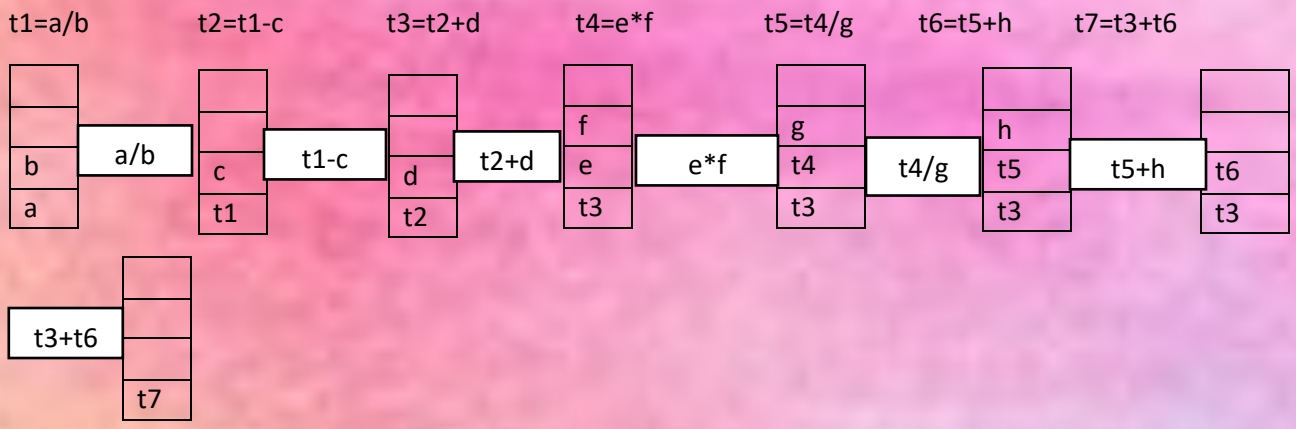
Prefija

+ + - / a b c d + / * e f g h

Postfija

a b / c - d + e f * g / h + +

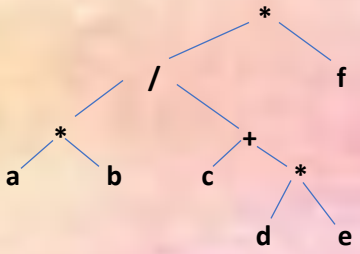
Código Intermedio



Código Ensamblador

```
LDA a;          STA t5;
DIV b;          LDA t5;
STA t1;         ADD h;
LDA t1;         STA t6;
SUB c;          LDA t3;
STA t2;         ADD t6;
LDA t2;         STA t7;
ADD d;
STA t3;
LDA e;
MUL f;
STA t4;
LDA t4;
DIV g;
```

13.- (a*b)/(c+d*e)*f



Prefija

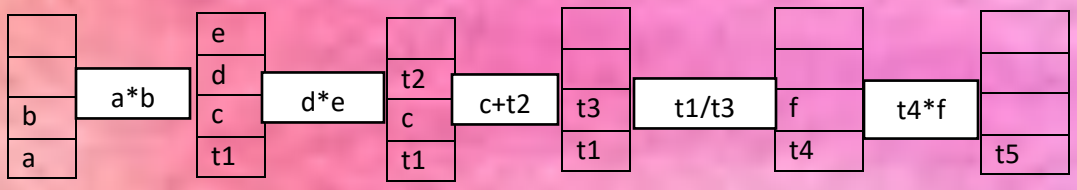
* / * a b + c * d e f

Postfija

a b * c d e * + / f *

Código Intermedio

t1=a*b t2=d*e t3=c+t2 t4=t1/t3 t5=t4*f

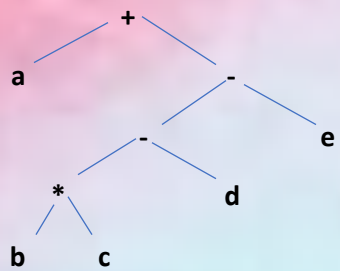


Código Ensamblador

```
LDA a;
MUL b;
STA t1;
LDA d;
MUL e;
STA t2;
LDA c;
ADD t2;
STA t3;
```

```
LDA t1;
DIV t3;
STA t4;
LDA t4;
MUL f;
STA t5;
```

14.- a+(b*c-d-e)



Prefija

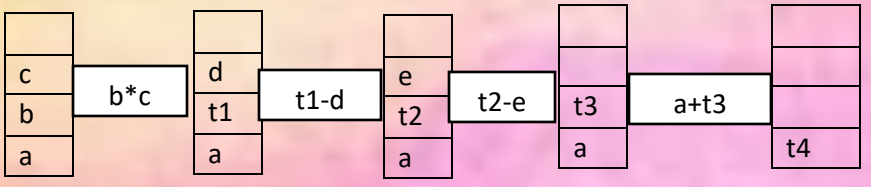
+ a - - * b c d e

Postfija

a b c * d - e - +

Código Intermedio

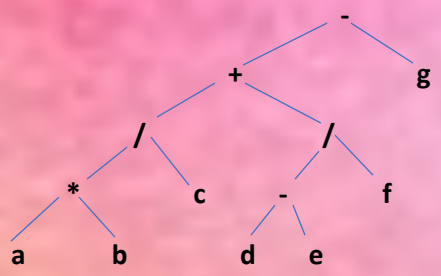
t1=b*c t2=t1-d t3=t2-e t4=a+t3



Código Ensamblador

```
LDA b;          LDA t2;
MUL c;          SUB e;
STA t1;         STA t3;
LDA t1;         LDA a;
SUB d;          ADD t3;
STA t2;         STA t4;
```

15.- (a*b/c)+(d-e)/f-g



Prefija

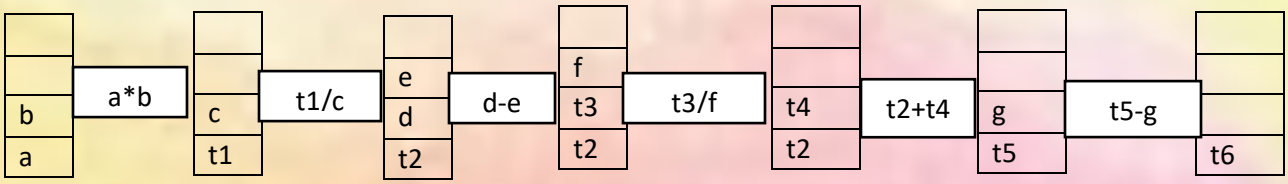
- + / * a b c / - d e f g

Postfija

a b * c / d e - f / + g -

Código Intermedio

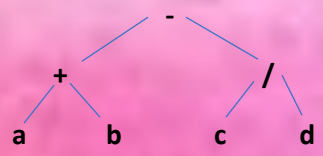
t1=a*b t2=t1/c t3=d-e t4=t3/f t5=t2+t4 t6=t5-g



Código Ensamblador

LDA a;	LDA t3;
MUL b;	DIV f;
STA t1;	STA t4;
LDA t1;	LDA t2;
DIV c;	ADD t4;
STA t2;	STA t5;
LDA d;	LDA t5;
SUB e;	SUB g;
STA t3;	STA t6;

16.- a+b-(c/d)



Prefija

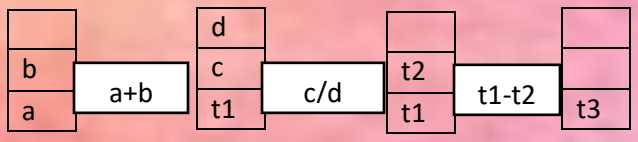
- + a b / c d

Postfija

a b + c d / -

Código Intermedio

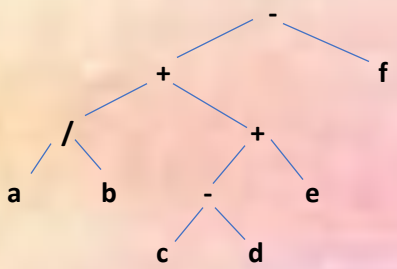
t1=a+b t2=c/d t3=t1-t2



Código Ensamblador

LDA a;	STA t2;
ADD b;	LDA t1;
STA t1;	SUB t2;
LDA c;	STA t3;
DIV d;	

17.- (a/b)+(c-d+e)-f



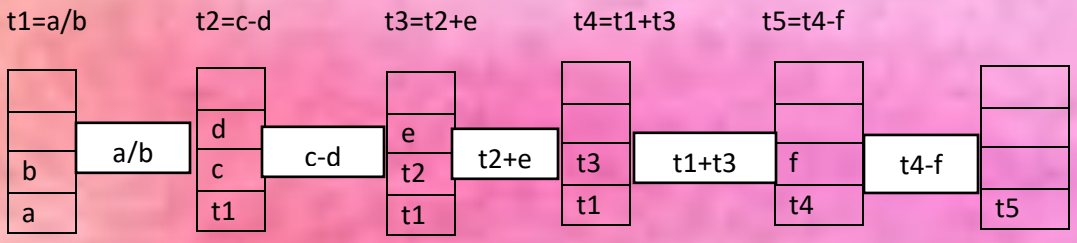
Prefija

- + / a b + - c d e f

Postfija

a b / c d - e + + f -

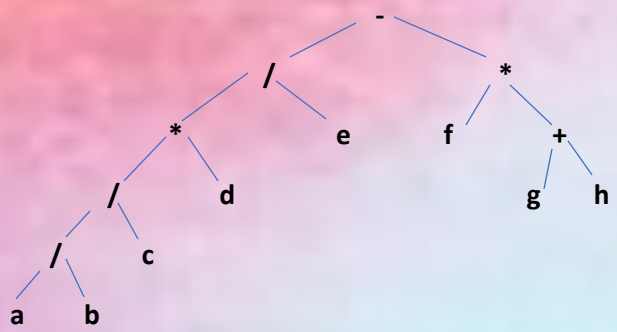
Código Intermedio



Código Ensamblador

```
LDA a;          LDA t1;
DIV b;          ADD t3;
STA t1;         STA t4;
LDA c;          LDA t4;
SUB d;          SUB f;
STA t2;         STA t5;
LDA t2;
ADD e;
STA t3;
```

18.- a/b/c*d/e-f*(g+h)



Prefija

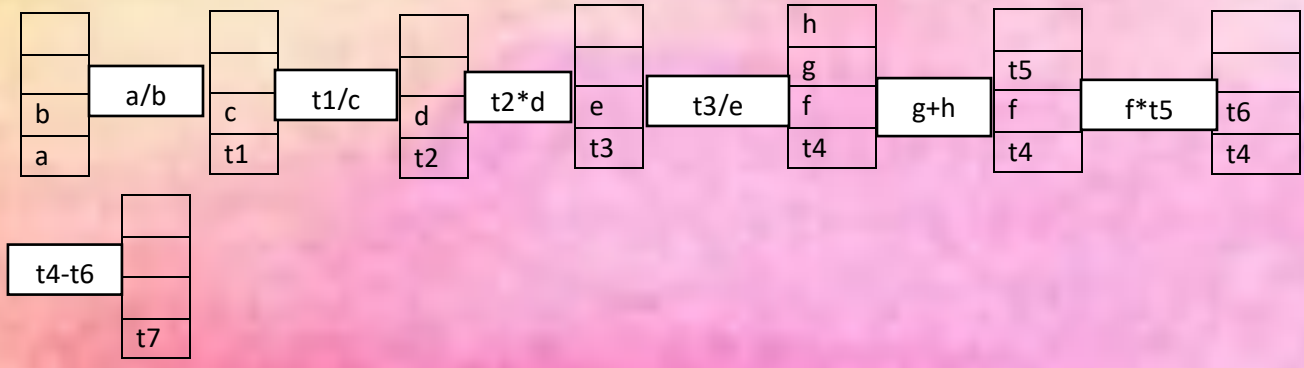
- / * / / a b c d e * f + g h

Postfija

a b / c / d * e / f g h + * -

Código Intermedio

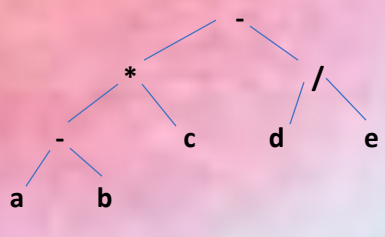
t1=a/b t2=t1/c t3=t2*d t4=t3/e t5=g+h t6=f*t5 t7=t4-t6



Código Ensamblador

```
LDA a;          LDA g;
DIV b;          SUM h;
STA t1;         STA t5;
LDA t1;         LDA f;
DIV c;          MUL t5;
STA t2;         STA t6;
LDA t2;         LDA t4;
MUL d;          SUB t6;
STA t3;         STA t7;
LDA t3;
DIV e;
STA t4;
```

19.- (a-b)*c-d/e



Prefija

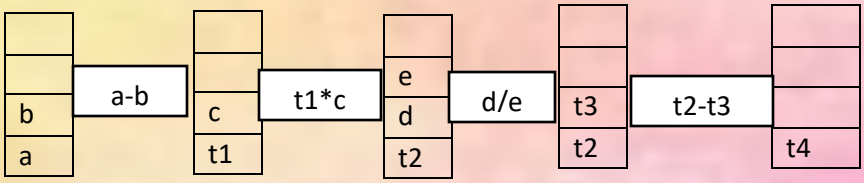
- * - a b c / d e

Postfija

a b - c * d e / -

Código Intermedio

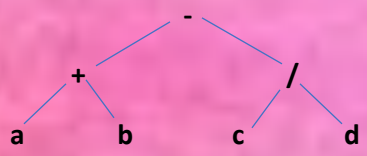
t1=a-b t2=t1*c t3=d/e t4=t2-t3



Código Ensamblador

```
LDA a;          LDA d;
SUB b;          DIV e;
STA t1;         STA t3;
LDA t1;         LDA t2;
MUL c;          SUB t3;
STA t2;         STA t4;
```

20.- (a+b)-c/d



Prefija

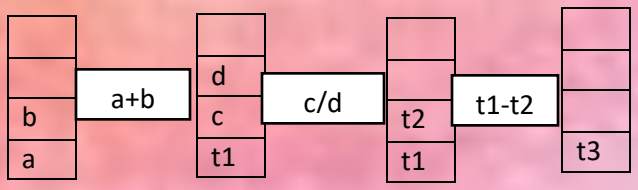
- + a b / c d

Postfija

a b + c d / -

Código Intermedio

t1=a+b t2=c/d t3=t1-t2



Código Ensamblador

```
LDA a;          DIV d;          STA t3;
ADD b;          STA t2;
STA t1;         LDA t1;
LDA c;          SUB t2;
```