

Soru: Top Down Parsing

a)Aşağıda verilen gramer için tek durumlu bir PDA çevirici tasarlayınız.

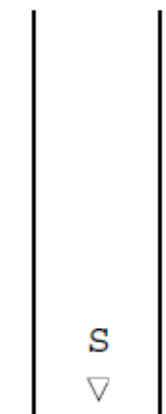
b)Recursive Descent ParserTasarlayınız.

1.  $S \rightarrow a A S$
2.  $S \rightarrow b$
3.  $A \rightarrow c A S$
4.  $A \rightarrow \epsilon$

Cevap:

a) Tek durumlu bir PDA çevirici

	a	b	c	$\epsilon$
S	Rep (SAa) KAYDET	Rep (b) KAYDET	Reject	Reject
A	Pop KAYDET	Pop KAYDET	Rep (SAc) Retain	Reject
a	Pop İLERLE	Reject	Reject	Reject
b	Reject	Pop İLERLE	Reject	Reject
c	Reject	Reject	Pop İLERLE	Reject
$\nabla$	Reject	Reject	Reject	Accept



Initial  
Stack

## b)Recursive Descent Parser

```
char inp;
void parse ()
{   cin >> inp;
    S ();
    if (inp=='\n') accept();
    else reject();
}

void S ()
{   if (inp=='a')                // apply rule 1
    {   cin >> inp;
        A();
        S();
    }                            // end rule 1
    else if (inp=='b') cin >> inp; // apply rule 2
    else reject();
}

void A ()
{   if (inp=='c')                // apply rule 3
    {   cin >> inp;
        A ();
        S ();
    }                            // end rule 3
    else if (inp=='a' || inp=='b') ; // apply rule 4
    else reject();
}
```