

```

based_num → basechar num { based_num.val=num.val
                             num.base=basechar.base }

basechar → o                { basechar.base=8 }
basechar → d                { basechar.base=10 }

num → num1 digit          { num.val= error, if digit.val = error OR num1.val=error
                             else
                             num.val=num1.val*num.base+digit.val }
                             { num1.base=num.base
                             digit.base=num.base }

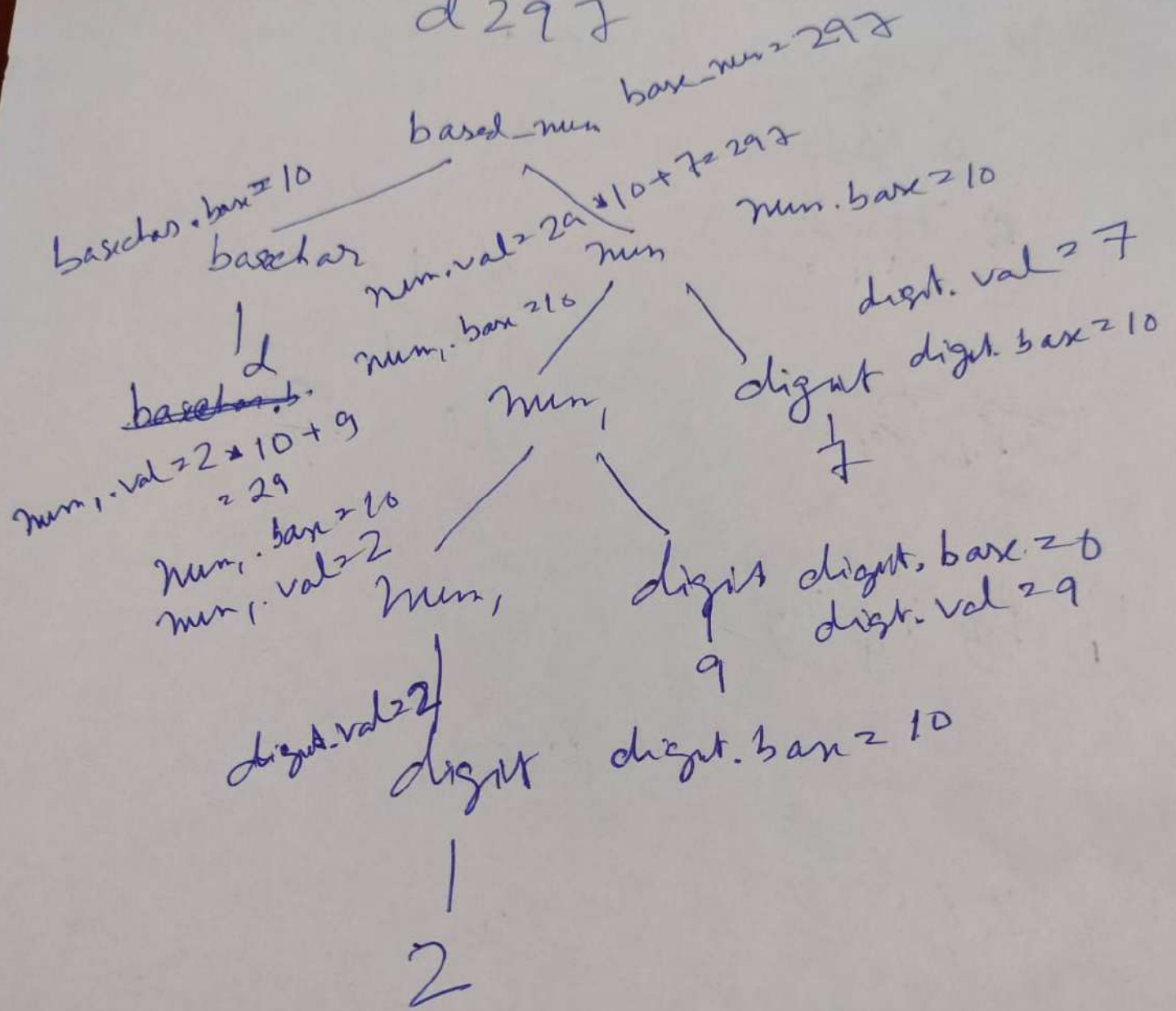
num → digit                  { num.val=digit.val
                             digit.base=num.base }

digit → 0|1|2|3|4|5|6|7     digit.val=0-7

digit → 8/9                  { digit.val=error
                             If digit.base=8/9
                             Else
                             digit.val=error }

```


d 297



S.code = if False a > b
 B.code = if c < d goto L3
 if False p > 100
 goto L2
 L3: x = 0
 goto L1
 L2: x = 1

P
 S
 B.code = if False a > b
 goto L2
 if c < d goto L3
 if False p > 100
 goto L2
 L3:
 if c < d goto L3
 if False p > 100
 goto L2
 L3:
 if c < d goto L3
 if False p > 100
 goto L2
 L3:
 if c < d goto L3
 if False p > 100
 goto L2

B₁.T = fall B₁
 B₁.F = L2
 E₁ > E₂
 a | b

B₁.code = if False a > b
 goto L2

B₂.T = fall
 B₂.F = L2
 (B)

B₁.T = L3
 B₁.F = fall B₁
 B.code = if c < d
 goto L2
 E₁ < E₂

B₂.T = fall
 B₂.F = L2
 B₂.code = if False
 p > 100
 goto L2
 E₁ > E₂

(P) | (100)

P.code = S.code / L1
 if False a > b goto L2
 if c < d goto L3
 if False p > 100 goto L2
 L3: x = 0
 goto L1
 L2: x = 1
 L1:

$S \rightarrow \text{if } (B) S_1 \text{ else } S_2$

$B.\text{True} = \text{fall}$

$B.\text{False} = \text{newlabel}()$

$S_1.\text{next} = S_2.\text{next} = S.\text{next}$

$S.\text{code} = B.\text{code} \parallel S_1.\text{code} \parallel \text{gen}(\text{goto } S.\text{next})$
 $\parallel \text{label}(B.\text{false}) \parallel S_2.\text{code}$

$B \rightarrow B_1 \&\& B_2$

$B_1.\text{True} = \text{fall}$

$B_1.\text{False} = \text{if } B_2.\text{True} \neq \text{fall} \text{ then } B.\text{False}, \text{ else } \text{newlabel}()$

$B_2.\text{True} = B.T$

$B_2.\text{False} = B.F$

$B.\text{code} = \text{if } B.\text{false} \neq \text{fall}, \text{ then } B_1.\text{code} \parallel B_2.\text{code},$
 $\text{else } B_1.\text{code} \parallel B_2.\text{code} \parallel \text{label}(B_1.\text{False})$

$B \rightarrow B_1 \parallel B_2$

$B_1.\text{True} = \text{if } B.\text{True} \neq \text{fall} \text{ then } B.\text{True}, \text{ else } \text{newlabel}()$

$B_1.\text{False} = \text{fall}$

$B_2.\text{True} = B.\text{True}$

$B_2.\text{False} = B.\text{False}$

$B.\text{code} = \text{if } B.\text{True} \neq \text{fall}, \text{ then } B_1.\text{code} \parallel B_2.\text{code}$

$\text{else } B_1.\text{code} \parallel B_2.\text{code} \parallel \text{label}(B_1.\text{True})$