Homework 6
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Question 1.

b. 1.

PTNAME REGNUM STRLIT

2.

```
         File
  Record      tail
   /    \       \
PTNAME  REGNUM  healthCondns
```
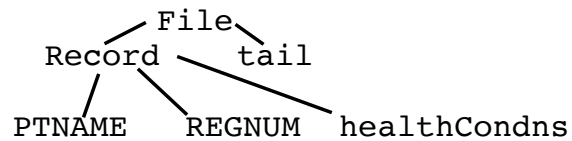
3.

Condns -> onehealthCondn | onehealthCondn COMMA condns

c. left factoring CFG

condns -> onehealthCondn | onehealthCondn COMMA condns

||

Condns -> onehealthCondn Condns'
Condns' -> COMMA condns | epsilon

d. removing left recursion

stars -> stars STAR | STAR

||

Stars -> STAR stars'
Stars' -> STAR stars' | Epsilon

Question 2. selector table

```
aa → A ee bb B
bb → cc bb
   | ε
cc → D C
   | F ee bb B dd
dd → E A ee bb B
   | ε
ee → ff ee
   | ε
ff → hh D gg
gg → C
   | H C
hh → G
   | J
```

Nonterminal X	FIRST (X)	FOLLOW (X)
Aa	A	EOF
bb	D,F,ε	B
cc	D,F	D,F,B
dd	E,ε	D,F,B
ee	G,J,ε	D,F,B
ff	G,J	G,J,D,F,B
gg	C,H	G,J,D,F,B
hh	G,J	D

x	FIRST set
A ee bb B	A
cc bb	D,F
D C	D
F ee bb B dd	F
E A ee bb B	E
ff ee	G,J
hh D gg	G,J
C	C
J	J
G	G
H C	H
ε	ε