COMP 410
Fall 2020

Unification with Lists in Prolog

Finish writing the unifications below so that the queries produce the correct values. The first one has been done for you, with the answer shown in **bold**.

1.)----------

```
?- List = [1, 2, 3, 4, 5],

   List = X.

List = X,
X = [1, 2, 3, 4, 5].
```

2.)----------

```
?- List = [1, 2, 3, 4, 5],

   List =

List = [1, 2, 3, 4, 5],
H = 1,
T = [2, 3, 4, 5].
```

3.)----------

```
?- List = [1, 2, 3, 4, 5],

   List =

List = [1, 2, 3, 4, 5],
A = 1,
B = 2,
T = [3, 4, 5].
```

4.)----------

```
?- List = [1, 2, 3, 4, 5],

   List =

List = [1, 2, 3, 4, 5],
A = 1,
B = 2.
% different problem than #3 - no T
```

5.)----------
```
?- List = [1, 2, 3],

   List =

List = [1, 2, 3],
A = 1,
B = 2,
C = 3.
```

6.)----------
```
?- List = [[1, 2], 3],

   List =

List = [[1, 2], 3],
A = [1, 2],
B = [3].
```

7.)----------
```
?- List = [[1, 2], 3],

   List =

List = [[1, 2], 3],
A = 1,
B = [2],
C = [3].
```

8.)----------
```
?- List = [[1, 2], [3, 4]],

   List =

List = [[1, 2], [3, 4]],
A = 1,
B = 2,
C = [4],
D = [].
```