

Logic Programming

Assignment 3

Due: Next Section.

3. (5 Points) Write a predicate `list_sum(list, sum)` that succeeds if 'sum' is the sum of elements of 'list', consisting of numbers.

Sample runs:

```
?- list_sum([1,2,3], 6).
```

```
true
```

```
?- list_sum([1,2,3], X).
```

```
X=6.
```

```
?- list_sum([], X).
```

```
X=0.
```

What does your program return on the following queries?

```
?- list_sum(L, X).
```

```
?- list_sum(L, 2).
```

```
?- list_sum([a,b,c], X).
```

4. (5 Points) Write a prolog program to alter every element less than 10 in a list of integers with its Alphabet name. if the number ≥ 10 do nothing.

Sample run:

```
?- Alter( [1, 3, 21], X).
```

```
X= [one, three, 21].
```