EECS 376: Foundations of Computer Science

Discussion 4 (Sec 23) Activity Sheet

List **uniqnames** of group members below:

Introduction

Nick is trying to design an advertisement, but Droopy is charging him for every row of text he uses! Each row can fit 10 characters, including letters, spaces, and punctuation. Nick needs to place the text in order, without splitting any words across rows. His goal is to use the *fewest* number of rows possible to keep the costs low and avoid paying too much to Droopy.

Suppose the text Nick needs to fit into his advertisement is:

```
The quick brown fox jumps over the lazy dog.
```

and here is what he did:

T	h	e		q	u	i	c	k	
b	r	o	w	n		f	o	x	
j	u	m	p	s					
o	v	e	r		t	h	e		
l	a	z	y		d	o	g	.	

Your Task

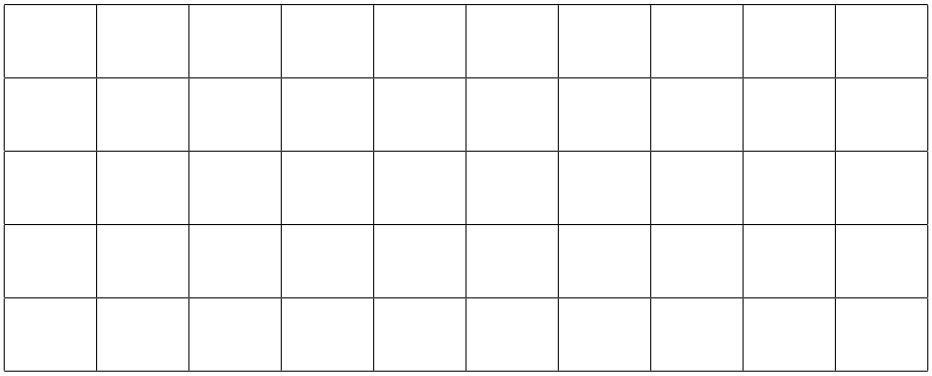
Now it's your turn! Work with your group to come up with a **different** way of fitting the same sentence into the advertisement space, but make sure you use **no more than** the number of rows Nick used.

Rules:

- You cannot split any words across two rows.
- You must copy the sentence in order.
- Use a greedy approach to rearrange the words and spaces as efficiently as possible on every row.

Use the grid on the next page to write your solution.

```
The quick brown fox jumps over the lazy dog.
```



Discussion

Nick's solution is in fact optimal. Look at the first word in your solution that appears on a different row compared to Nick's solution. What do you observe? Can you generalize this observation to other potential optimal solutions?