

CSC120H Fall 2018 Worksheet: Dictionaries

```
from typing import Dict, List
```

3. The express checkout is for grocery orders with 8 or fewer items. Complete the examples in the docstring and then complete the function body.

```
def express_checkout(product_to_quantity: Dict[str, int]) -> bool:
    """Return True iff the grocery order in product_to_quantity qualifies for the
    express checkout. product_to_quantity maps products to the numbers of those
    items in the grocery order.
```

```
>>> express_checkout({'banana': 3, 'soy milk': 1, 'peanut butter': 1})
```

```
>>> express_checkout({'banana': 3, 'soy milk': 1, 'twinkie': 5})
```

```
"""
```

4. As part of a study funded by a major shoe company, we crouched at the finish line of the Boston marathon and kept an ordered list of the shoes that we saw as they passed the finish line. Write a function that, given such a list, will return a dictionary mapping shoe companies to a list of the placements achieved by runners wearing shoes made by those companies.

```
def build_placements(shoes: List[str]) -> Dict[str, List[int]]:
    """Return a dictionary where each key is a company and each value is a
    list of placements by people wearing shoes made by that company.
```

```
>>> result = build_placements(['Saucony', 'Asics', 'Asics', 'NB', 'Saucony', \
'Nike', 'Asics', 'Adidas', 'Saucony', 'Asics'])
```

```
>>> result == {'Saucony': [1, 5, 9], 'Asics': [2, 3, 7, 10], 'NB': [4], \
'Nike': [6], 'Adidas': [8]}
```

```
True
```

```
"""
```