

## Shift-reduce example

Based on [these slides](#) by [Dávid Nemeskey](#)

## The input sentence

*Book me the morning flight.*

Stack | Buffer

| Action

Book me the morning flight

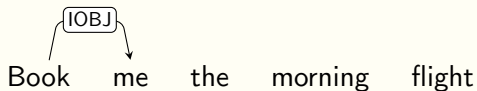
|       |                                |        |
|-------|--------------------------------|--------|
| Stack | Buffer                         | Action |
| root  | book, me, the, morning, flight | SHIFT  |

Book me the morning flight

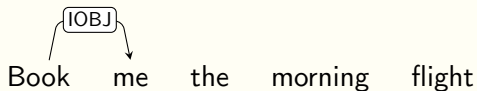
| Stack      | Buffer                         | Action |
|------------|--------------------------------|--------|
| root       | book, me, the, morning, flight | SHIFT  |
| root, book | me, the, morning, flight       | SHIFT  |

Book me the morning flight

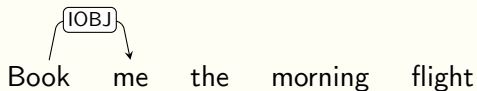
| Stack          | Buffer                         | Action    |
|----------------|--------------------------------|-----------|
| root           | book, me, the, morning, flight | SHIFT     |
| root, book     | me, the, morning, flight       | SHIFT     |
| root, book, me | the, morning, flight           | RIGHT ARC |



| Stack          | Buffer                         | Action    |
|----------------|--------------------------------|-----------|
| root           | book, me, the, morning, flight | SHIFT     |
| root, book     | me, the, morning, flight       | SHIFT     |
| root, book, me | the, morning, flight           | RIGHT ARC |
| root, book     | the, morning, flight           | SHIFT     |

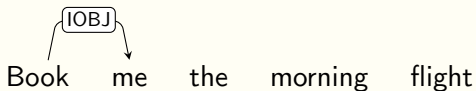


| Stack           | Buffer                         | Action    |
|-----------------|--------------------------------|-----------|
| root            | book, me, the, morning, flight | SHIFT     |
| root, book      | me, the, morning, flight       | SHIFT     |
| root, book, me  | the, morning, flight           | RIGHT ARC |
| root, book      | the, morning, flight           | SHIFT     |
| root, book, the | morning, flight                | SHIFT     |

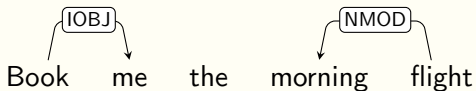




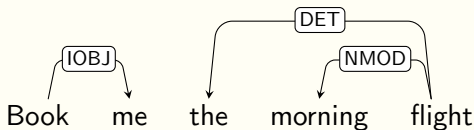
| Stack                    | Buffer                         | Action    |
|--------------------------|--------------------------------|-----------|
| root                     | book, me, the, morning, flight | SHIFT     |
| root, book               | me, the, morning, flight       | SHIFT     |
| root, book, me           | the, morning, flight           | RIGHT ARC |
| root, book               | the, morning, flight           | SHIFT     |
| root, book, the          | morning, flight                | SHIFT     |
| root, book, the, morning | flight                         | SHIFT     |



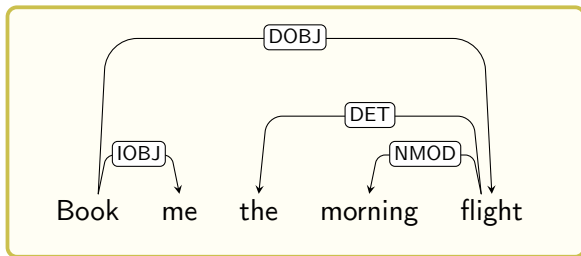
|                                  |                                |           |
|----------------------------------|--------------------------------|-----------|
| Stack                            | Buffer                         | Action    |
| root                             | book, me, the, morning, flight | SHIFT     |
| root, book                       | me, the, morning, flight       | SHIFT     |
| root, book, me                   | the, morning, flight           | RIGHT ARC |
| root, book                       | the, morning, flight           | SHIFT     |
| root, book, the                  | morning, flight                | SHIFT     |
| root, book, the, morning         | flight                         | SHIFT     |
| root, book, the, morning, flight |                                | LEFT ARC  |



| Stack                            | Buffer                         | Action    |
|----------------------------------|--------------------------------|-----------|
| root                             | book, me, the, morning, flight | SHIFT     |
| root, book                       | me, the, morning, flight       | SHIFT     |
| root, book, me                   | the, morning, flight           | RIGHT ARC |
| root, book                       | the, morning, flight           | SHIFT     |
| root, book, the                  | morning, flight                | SHIFT     |
| root, book, the, morning         | flight                         | SHIFT     |
| root, book, the, morning, flight |                                | LEFT ARC  |
| root, book, the, flight          |                                | LEFT ARC  |



| Stack                            | Buffer                         | Action    |
|----------------------------------|--------------------------------|-----------|
| root                             | book, me, the, morning, flight | SHIFT     |
| root, book                       | me, the, morning, flight       | SHIFT     |
| root, book, me                   | the, morning, flight           | RIGHT ARC |
| root, book                       | the, morning, flight           | SHIFT     |
| root, book, the                  | morning, flight                | SHIFT     |
| root, book, the, morning         | flight                         | SHIFT     |
| root, book, the, morning, flight |                                | LEFT ARC  |
| root, book, the, flight          |                                | LEFT ARC  |
| root, book, flight               |                                | RIGHT ARC |



| Stack                            | Buffer                         | Action    |
|----------------------------------|--------------------------------|-----------|
| root                             | book, me, the, morning, flight | SHIFT     |
| root, book                       | me, the, morning, flight       | SHIFT     |
| root, book, me                   | the, morning, flight           | RIGHT ARC |
| root, book                       | the, morning, flight           | SHIFT     |
| root, book, the                  | morning, flight                | SHIFT     |
| root, book, the, morning         | flight                         | SHIFT     |
| root, book, the, morning, flight |                                | LEFT ARC  |
| root, book, the, flight          |                                | LEFT ARC  |
| root, book, flight               |                                | RIGHT ARC |
| root, book                       |                                | RIGHT ARC |

