

# Python String Manipulation & JSON Parsing Cheat Sheet (HackerRank)

## 1. Python String Basics

- Strings are immutable
- Indexing starts at 0
- Negative indexing supported

## 2. Common String Operations

`len(s) → length of string`  
`s.lower(), s.upper(), s.title()`  
`s.strip(), s.lstrip(), s.rstrip()`  
`s.replace('a','b')`  
`s.split(',')`  
`'.'.join(list)`

## 3. String Slicing

`s[start:end]`  
`s[:5], s[2:], s[-3:]`  
`s[::-1] → reverse string`

## 4. Searching & Checking

`s.find('a') → index or -1`  
`s.index('a') → error if not found`  
`'a' in s`  
`s.startswith('pre'), s.endswith('end')`  
`s.isdigit(), s.isalpha(), s.isalnum()`

## 5. String Formatting

`f"Hello {name}"`  
`"{} {}".format(a,b)`  
`%s %d" % (name, age)`

## 6. JSON Basics

`JSON ↔ Python dict/list`  
`import json`

## 7. JSON Parsing

`json.loads(str) → dict`  
`json.load(file) → dict`

## 8. JSON Writing

```
json.dumps(obj)
json.dump(obj, file)
indent=2, sort_keys=True
```

## 9. JSON Access & Manipulation

```
data['key']
data.get('key', default)
for k,v in data.items():
for item in data['list']:
```

## 10. HackerRank Tips

- Handle input as string first
- Strip newline characters
- Use try/except for parsing
- Print exact output format
- Avoid unnecessary imports