Python Dictionary Examples

1. Basic Dictionary

```
student = {
    "name": "Sri",
    "age": 31,
    "role": "Student",
    "course": "Python Full Stack",
    "hobby": "Reading science books"
}


print(student["name"])
print(student["course"])
```

Output:

Output:

Sri

Python Full Stack

2. Updating a Dictionary

Code:

```
student["age"] = 32
student["city"] = "Hyderabad"


print(student)
```

Output:

Output:

{'name': 'Sri', 'age': 32, 'role': 'Student', 'course': 'Python Full Stack', 'hobby': 'Reading science books', 'city': 'Hyderabad'}

3. Nested Dictionary

Code:

```
profile = {
   "personal": {
      "name": "Sri",
      "age": 31,
      "city": "Hyderabad"
   },
   "education": {
      "degree": "Cyber Security",
      "current_course": "Python Full Stack",
      "fav_subject": "Science"
   }
}


print(profile["personal"]["city"])
print(profile["education"]["fav_subject"])
```

Output:

Output:

Hyderabad

Science

4. Dictionary with Lists

Code:

```
skills = {
```

```
    "hobbies": ["Reading", "Exploring tech", "Learning coding"],
    "skills": ["Python", "Cyber Security", "HTML", "CSS"]
}

print(skills["hobbies"][0])
print(skills["skills"][-1])
```

Output:

Output:

Reading

CSS

6. Using get() to Avoid Errors

Code:

```
student = {
    "name": "Sri",
    "age": 31,
    "role": "Student",
    "course": "Python Full Stack"
}

print(student.get("hobby", "Not mentioned"))
```

Output:

Output:

Not mentioned

7. Removing Items

Code:

```
student.pop("role")

print(student)


student.clear()

print(student)
```

Output:

Output:

```
{'name': 'Sri', 'age': 31, 'course': 'Python Full Stack'}

{}
```

8. Dictionary of Friends

Code:

```
friends = {

    "Ram": {"age": 30, "city": "Chennai"},

    "Anu": {"age": 28, "city": "Hyderabad"},

    "Sri": {"age": 31, "city": "Hyderabad"}

}


print(friends["Anu"]["city"])
```

Output:

Output:

```
Hyderabad
```

9. Dictionary Comprehension

Code:

```
squares = {x: x*x for x in range(1, 6)}

print(squares)
```

Output:

Output:

{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}

10. Merging Dictionaries

Code:

```
profile = {"name": "Sri", "age": 31}

study = {"course": "Python Full Stack", "project": "Human Activity Recognition"}


merged = {**profile, **study}

print(merged)
```

Output:

Output:

{'name': 'Sri', 'age': 31, 'course': 'Python Full Stack', 'project': 'Human Activity Recognition'}