```
from itertools import combinations
lst = [1, 2, 3]
all_combos = []
for r in range(1, len(lst) + 1):
    all_combos.extend(combinations(lst, r))
print("All combinations:")
for c in all_combos:
    print(c)
```

Output

```
All combinations:
(1,)
(2,)
(3,)
(1, 2)
(1, 3)
(2, 3)
(1, 2, 3)
```

Exercise 1.2

```
# Create a list of tuples
Tup = [(1, 2, 3), (4, 5, 6), (7, 8, 9)]
# Calculate the sum of elements in each tuple
Result = [sum(x) for x in tup]
# Display the result
```

```
Print("Sum of elements of each tuple:", result)
```

Output

```
Sum of elements of each tuple: [6, 15, 24]
```

Exercise 1.3

```
# Create a dictionary with two keys and values
D = {'1': ['a', 'b'], '2': ['x', 'y']}
# Display all combinations
For I in d['1']:
   For j in d['2']:
      Print(I + j)
```

Output

```
Ax
Ay
Bx
By
```