FUNCTIONS PRACTICAL QUESTIONS

🔶 Q1: Create a function that takes your name and age, and prints a greeting like "Hi, I am anu and I am 22 years old."

✅ Answer:

```
void introduce(String name, int age) {
  print("Hi, I am $name and I am $age years old.");
}
  introduce("Anu", 22);
```

🔷 Q2: Function to check if a username is valid (must be at least 6 characters).
✅ Answer:

```
bool isValidUsername(String username) {
  return username.length >= 6;
}
print(isValidUsername("ansila"));  // true
print(isValidUsername("ani"));     // false
```

🔷 Q3: Function to check if a string contains the word “flutter” (case insensitive).
✅ Answer:

```
bool containsFlutter(String text) {
  return text.toLowerCase().contains("flutter");
}
print(containsFlutter("I love Flutter!")); // true
```

🔷 Q5: Create a function that hides an email address (like an****@gmail.com).
✅ Answer:

```
String hideEmail(String email) {
  int atIndex = email.indexOf('@');
  String name = email.substring(0, atIndex);
  String hiddenName = name.substring(0, 2) + "****";
  return hiddenName + email.substring(atIndex);
}
print(hideEmail("ansila123@gmail.com")); // an****@gmail.com
```

🔷 6. Print all items in a list

```
void printItems(List<String> items) {
  for (String item in items) {
    print(item);
  }
}

void main() {
  printItems(["Apple", "Banana", "Mango"]);
}
```

🔷 7. Count how many items start with a capital letter

```
int countCapitalWords(List<String> words) {
  return words.where((word) => word[0] == word[0].toUpperCase()).length;
}

void main() {
  print(countCapitalWords(["Anu", "binu", "Chinju", "deepa"])); // Output: 2
}
```

🔷 8. Remove duplicates from a list

```
List<String> removeDuplicates(List<String> items) {
  return items.toSet().toList();
}

void main() {
  List<String> originalList = ["apple", "banana", "apple", "orange", "banana"];

  print("Original List: $originalList");

  List<String> uniqueList = removeDuplicates(originalList);

  print("List after removing duplicates: $uniqueList");
}
```

🔷 9. Reverse a list of strings

```
List<String> reverseList(List<String> items) {
  return items.reversed.toList();
}

void main() {
  print(reverseList(["Paris", "London", "Dubai"]));
```

```
}
```

🔷 10. Check if a word exists in a list

```
bool containsWord(List<String> list, String word) {
  return list.contains(word);
}

void main() {
  print(containsWord(["Wash", "Read", "Cook"], "Read")); // true
}
```

🔷 11. Convert all strings to uppercase

```
List<String> toUpperCaseList(List<String> items) {
  return items.map((item) => item.toUpperCase()).toList();
}

void main() {
  print(toUpperCaseList(["red", "green", "blue"]));
}
```

🔷 12. Filter names that start with 'A'

```
List<String> filterNamesWithA(List<String> names) {
  return names.where((name) => name.startsWith('A')).toList();
}

void main() {
  print(filterNamesWithA(["Anu", "Binu", "Ammu", "Chinju"]));
}
```

🔷 13. Print length of each string

```
void printStringLengths(List<String> items) {
  for (String item in items) {
    print("$item → ${item.length} characters");
  }
}

void main() {
  printStringLengths(["hello", "flutter", "dart"]);
}
```

🔷 14. Check if list is empty

```
bool isListEmpty(List items) {
  return items.isEmpty;
}

void main() {
  print(isListEmpty([]));        // true
  print(isListEmpty(["data"]));  // false
}
```

🔷 15. Add item if it’s not in the list

```
List<String> addIfNotExists(List<String> list, String item) {
  if (!list.contains(item)) {
    list.add(item);
  }
  return list;
}

void main() {
  print(addIfNotExists(["Pizza", "Burger"], "Pasta"));   // added
  print(addIfNotExists(["Pizza", "Burger"], "Pizza"));   // not added
}
```