

## ML Questions

What do the acronyms ML and SML stand for?

Describe what is meant by an imperative programming language.

Describe what is meant by a functional programming language.

Explain how an expression in Java can have side effects.

What is referential transparency?

Explain the difference between a binding in ML and an assignment in Java.

Describe the basic types in ML.

Describe conditional expressions in ML and Java.

How is a function defined in ML?

How many parameters can a function have in ML?

How can we implement a while loop (a for loop) in ML?

Describe the properties of lists in ML.

What predefined functions does ML have to work on lists?

Describe the properties of tuples in ML.

What predefined functions does ML have to work on tuples?

Explain how pattern matching is used in ML.

What happens if a function definition has two patterns that match the same actual parameter?

What is meant by lambda notation?

How does ML implement lambda notation?

What is meant by garbage collection?

Explain what it means for a function to be curried (uncurried).

What is the advantage of a curried function?

Why is it easier to prove the correctness of a function program than an imperative program?

What are the two basic strategies for scope rules in a block-structured programming language?

Describe the scope rules in ML.

Explain the let expressions in ML.

What is meant by a higher-order function?

How does the ML compiler deduce the types of the identifiers in a program?

What constraints does function application impose on the actual parameter and the result of a function call.

What is meant by tail recursion?

What is the main advantage of tail recursion?