



Programming I (Python)

Assignment 1

1. A working definition of a “safe” programming language is:
 1. A program written in the programming language can’t ever fail.
 2. A valid program will never fault because of an invalid machine operation.
 3. There are no runtime type errors.
 4. Type conversions are disallowed.
2. of the following will typecheck:
 1. `1 +. 2`
 2. `1 + 2`
 3. `1. +. 2.`
 4. `1.0 + 2.0`
 5. `1.0 +. 2.0`
 6. `1. +. 2`
3. The name of the OCaml debugger is:
 1. `ogdb`
 2. `odebug`
 3. `ocamldebug`
 4. `ocamlgdb`
4. Which of the following operators have left associativity:
 1. `+`
 2. `<>`
 3. `!=`
 4. `~-`
 5. `mod`
 6. `lsh`

7. Inot
5. In OCaml, When an expression is evaluated, which of following things may happen:
 1. It may evaluate to a value of the same type as the expression.
 2. If typechecked successfully, it will never raise an exception.
 3. It may not terminate.
 4. It is guaranteed to terminate.
6. Which of the following are true about Lisp programming language:
 1. Strictly typed
 2. Statically typed
 3. Dynamically typed
 4. Safe
7. Which of the following are true about OCaml programs:
 1. OCaml programs must always be written on the top loop.
 2. OCaml programs must be written in a file like in C.
 3. OCaml programs must always be compiled explicitly before being executed.
 4. OCaml compiler always produces native machine code as output as in C.
 5. OCaml compiler always produces bytecode as output as in Java.
 6. OCaml compiler can be used to produce either machine code or byte code as per user preference.
8. Which are possible ways of executing an OCaml program:
 1. Write on the OCaml toplevel.
 2. Write in a file and run with ocaml command.
 3. Write in a file, compile with ocamlc command and run the executable.
 4. Write in a file, compile with ocamlpt command and run the executable.
 5. Write in a file, compile with ocamlcom command and run the executable.
9. Which of the following statements is true about OCaml expressions:
 1. OCaml expressions can't have side-effects.
 2. OCaml expressions evaluate to a single value.
 3. Every expression has exactly one type.
 4. The type of the expression depends of the values evaluated so far.
10. What are the features of a first class object in a programming language?
 1. Can be called as a procedure
 2. Can be passed as a parameter to a function

3. Can be used as a type
4. Can be returned from a function as a value
5. Can be stored in a data-structure
6. Can be imported as a module