The Parts of a Language

Scanning or Lexing or Lexical Analysis

Parsing

Static Analysis

Binding

Scope resolution

Type Checking (if the language is static i.e. not dynamic... WTH! Do you mean?)

Symbol Tables or attribues store information related to identifiers

Intermediate representations

IRs acts as an interface between the front end and back end of a compiler pipeline, this allows you to run the same code on different architectures, and avoid repetition of front end on each architecture.

Optimization

Until IRs the user program and its intention is completely understood which means it can be optimized or in other words the IR can be modified in a way that is more efficient, it the user was lousy in terms of performance; some common example would be a variable that is constantly being accessed so many times could be stored in a register rather than the main memory, or constant folding, which is evaluating a mathematical expression by replacing it with its actual value. There are many other perf optimization techniques like dead code elimination, loop unrolling, constant propagation etc.

Code Generation

Generating primitives like assembly instructions. This is the backend of the compiler. During this stage we hit a dilemma, which is to directly compile to CPU code or a virtual machine. Unfortunately it is too expensive and infeasible to directly compile to CPU these days as the architectures are byzantine and way too complex, and implementing one means the compiler or the language is restricted to that particular architecture. Or the alternative route that is usually taken these days is to produce a virtual machine code known as p-code (portable code), known as bytecode and it is what it literally sounds, i.e. each instruction is a byte long.

Conclusion

So a compiler is basically a pipeline where each stage transforms the given data structure making it easy to manage by the next step of the pipeline, i.e scanning helps parsing which helps in intermediate code generation (like bytecode, or registers) which helps in optimization and finally code generation.