Coding conventions (or style guidelines)

most programming & scripting languages
have a publicly available "standard"
style guide, which may (or may not)
address file/directory structure as
well as code. __Why?__

some languages have multiple mutually
incompatible coding conventions,
probably posted by different organizations

you're probably already using some
coding conventions

a few examples are linked on convas,
we will look at the google guide
for Java — open sections

there are numerous "style checkers", often
as IDE plugins, that enforce styles

sometimes style checks are built into
a more general checker, generically
known as a static analysis tool or
static analyzer

static analysis = anything a tool (or
human) can do just by looking at the
code, without running it

dynamic analysis - checking, monitoring,
testing, etc. the code while executing
with specific inputs (usually set of inputs)

in addition to checking that code
conforms to coding conventions,
can also detect "patterns" in
the code that meet certain criteria

one thing they can look for is
"code smells"

code smells do not necessarily
indicate bugs, but tend to
make maintenance (or changes
during development - next iteration)
more difficult, thus likely to
lead to bugs

basically, badly written code

what are some "code smells"?
go through code smells list
on course work

many checkers listed at link
on canvas - if your favorite
programming language isn't
here, or the checkers it lists
aren't available or usable,
ask google   (try it)

teams will be asked to run checkers
on their project code, later on

for now, for practice, the first
homework is to run a checker
on some small program you
already wrote (or can find online)

go through 1st assignment