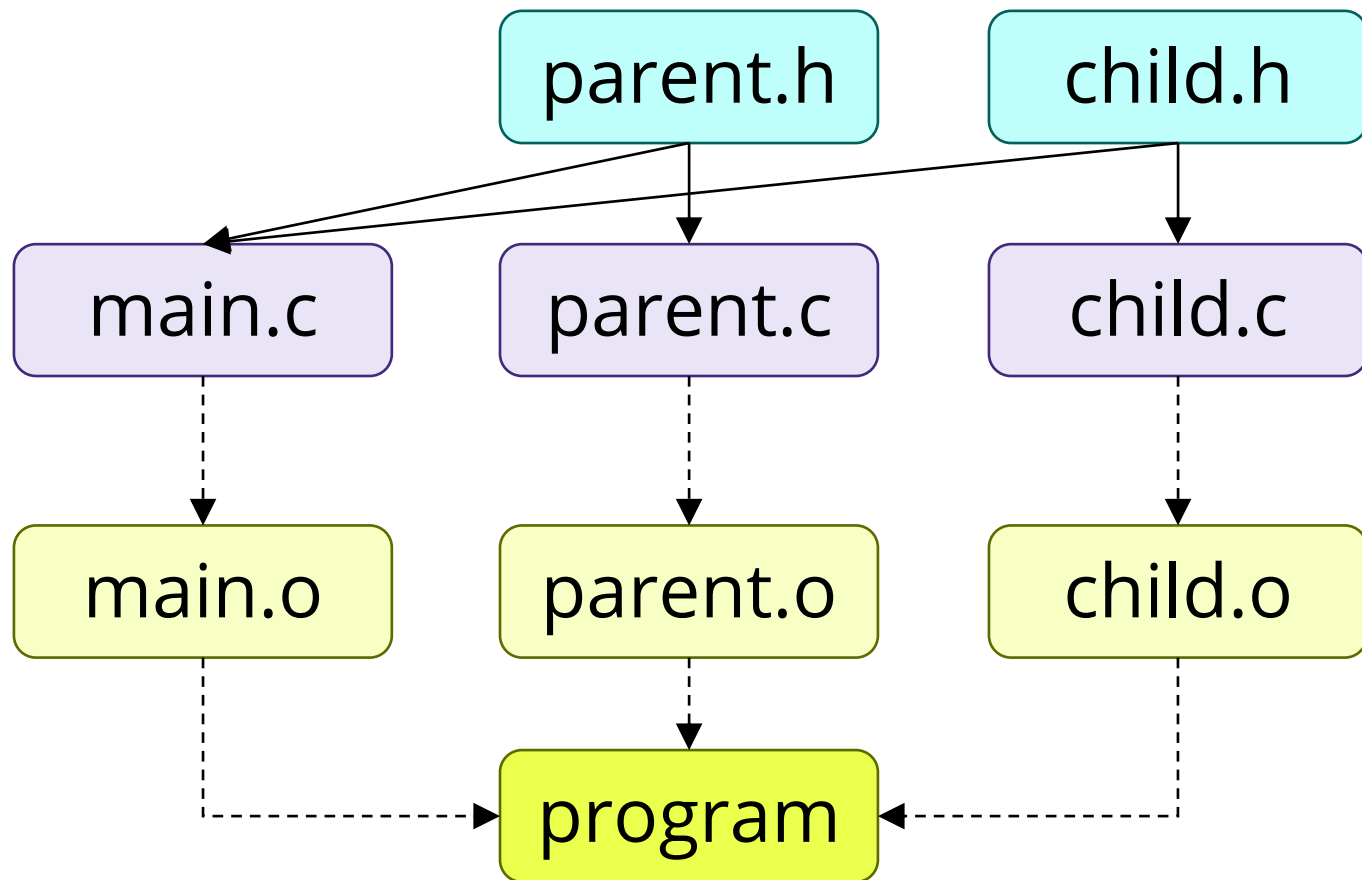


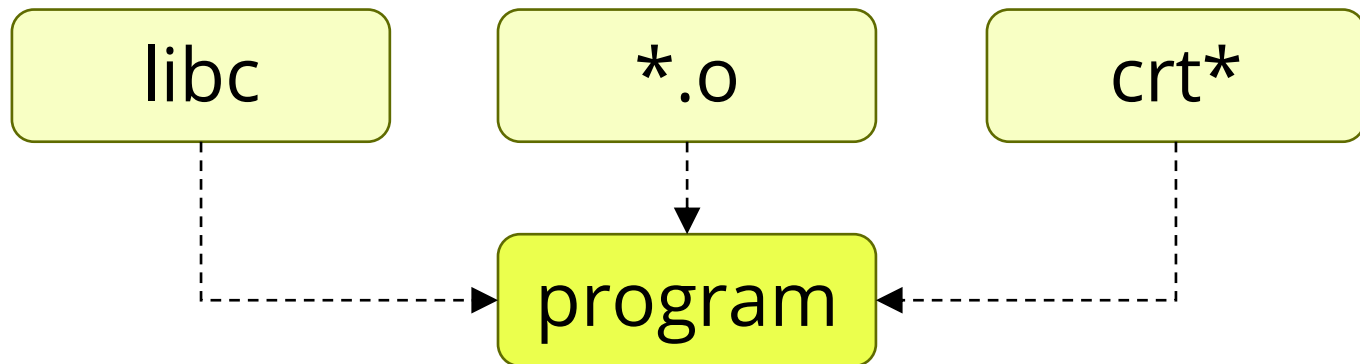
# Build Tools 1

COMS10012 Software Tools

C



# Linking in C



# Makefiles

TARGET: SOURCEFILES

» COMMAND  
» COMMAND...

```
GNU nano 4.3  
..spaces  
» tab|
```

ipc: main.o parent.o child.o

» gcc -g \$^ -o \$@

main.o: main.c parent.h child.h

» gcc -c main.c -o \$@

%.o: %.c common.h

» gcc -c \$< -o \$@

# Makefiles

**\$ make**

```
gcc -c main.c -o main.o
```

```
gcc -c parent.c -o parent.o
```

```
gcc -c child.c -o child.o
```

```
gcc main.o parent.o child.o -o ipc
```

**\$ make**

```
make: 'ipc' is up to date.
```

**\$ touch main.c**

**\$ make**

```
gcc -c main.c -o main.o
```

```
gcc main.o parent.o child.o -o ipc
```

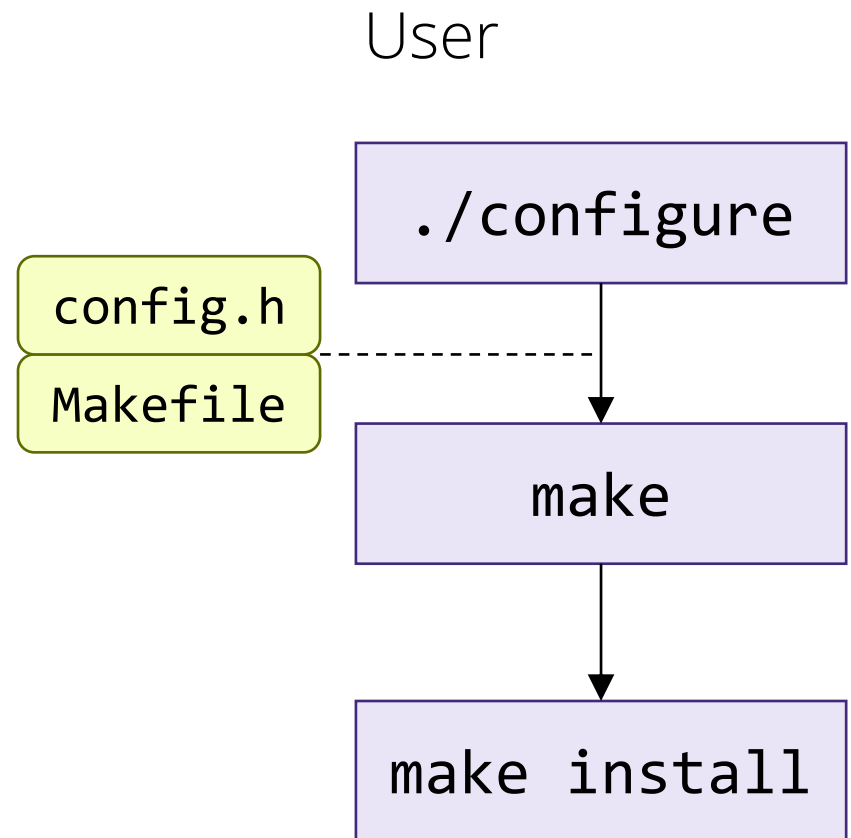
# Makefiles

```
.PHONY: clean
```

```
clean:
```

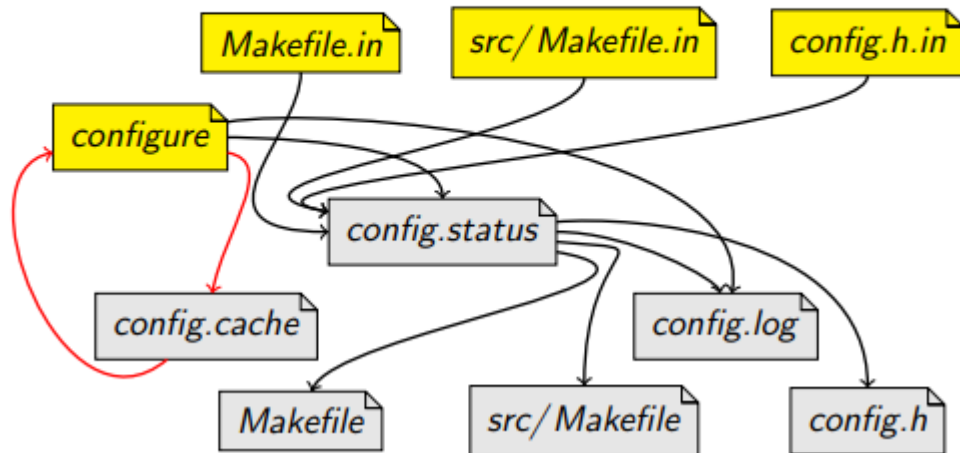
```
»    rm -f *.o ipc
```

# Configure



# Configure

The (real) *configure* process



<https://www.lrde.epita.fr/~adl/dl/autotools.pdf>

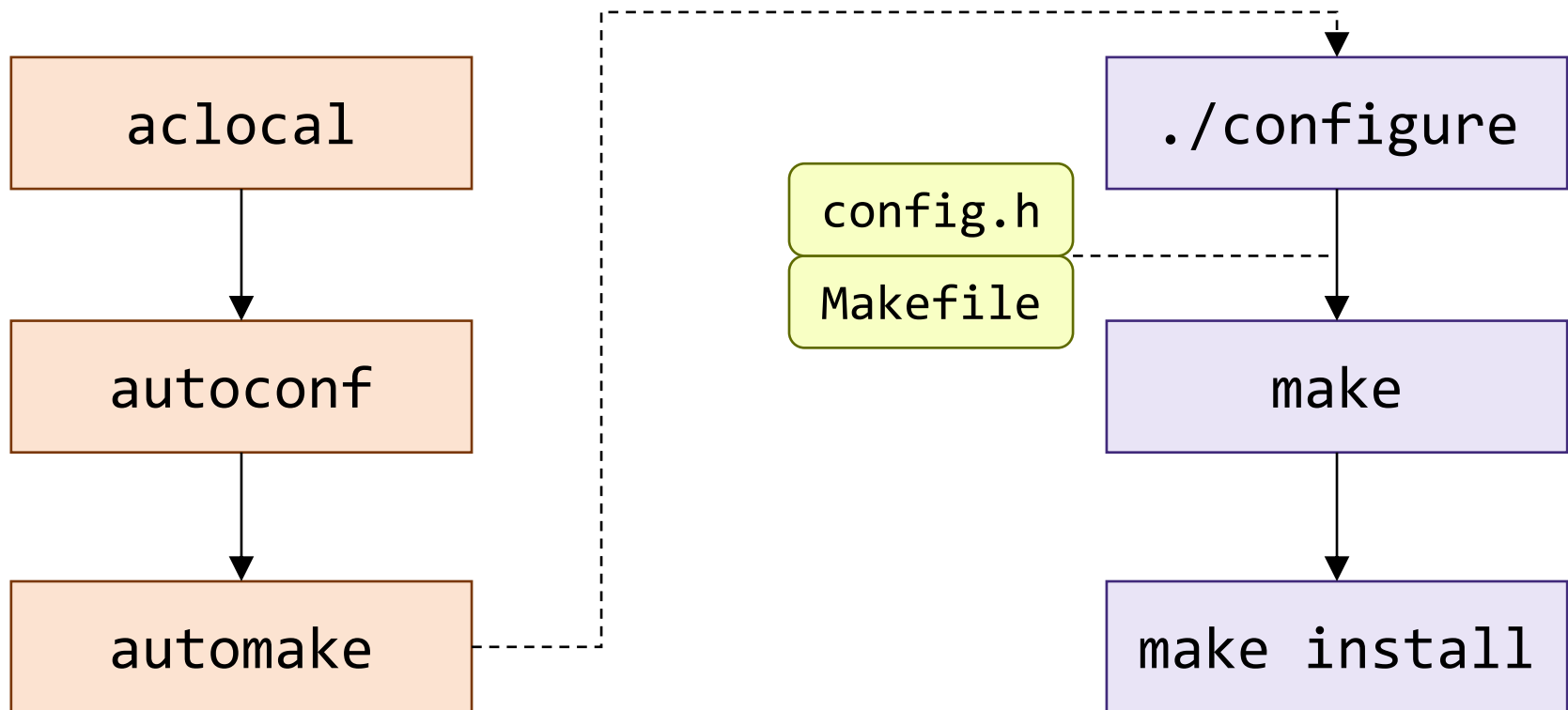




# Configure

Developer

User



aaaaaaaaaa



# Package managers

- Pre-built packages for each supported platform/architecture.
- One line to install.
- Repository of supported packages.
- Automatic dependency management.
- Automatic, or at least easy, updates.

