



How to debug an OCaml project

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What we learn

- `utop`: load the project into utop
- `dune`: build, test the project with dune
- Incremental development
- Adding user tests

Download the project

- CMSC330 Project 2A, OCaml Basics
- Clone or the download the project 2A from

<https://github.com/anwarmamat/cmsc330fall19public/tree/master/project2a>

- Read the Project Description
 - [README.md](#)

Install Software

- Install dunes

```
opam install dune
```

- Install utop

```
opam install utop
```

- Install `emacs` or your favorite text editor

Build and Test

- Build the project
`dune build test/public.exe`
- Run the test
`_build/default/test/public.exe`
- Build and Run the test together
`dune runtest`

Debug in utop

- Load the project

```
dune utop src
```

- Open the libs

```
Open Basics
```

- Show the signature

```
#show Basics
```

```
#show fun_name
```

More Testing Tricks

- List all tests

```
_build/default/test/public.exe -list-tests
```

```
public:0:rev_tup
```

```
public:1:max_tup
```

```
public:2:abs
```

```
...
```

- Run a single test

```
_build/default/test/public.exe public:0
```

Ready?

- Implement your solution incrementally
- Get help
 - Piazza, office hours, email
- Submit early
 - Submit to gradescope
- Add more tests
 - We have secret tests.