



# Operating Systems Lab (C+Unix)

**Enrico Bini**

University of Turin

# Outline

## 1 Environment variables

# Environment variables

- Each process has an associated array of strings called the list of **environment variables**
- Environment variables enable the exchange of information between the program and the “environment”
- Env. variables are a way to pass parameters to the application
- Stored as **name=value pair**
- Example of environment variables are:
  - ▶ **HOME:** home directory
  - ▶ **LOGNAME:** user name
  - ▶ **PATH:** list of directories where executables are searched for
- The user can set environment variables by the command **export**  
**export USERVAR=4**  
The value of the variables is always a **string**
- **they** can be shown by the command **printenv**

# Environment variables in C

- the list of environment variables can be accessed using the global variable

```
extern char ** environ;
```

- `environ` points to a **NULL-terminated array of pointers to strings**.
- the function

```
char * getenv(const char * name)
```

accessible by including

```
#include <stdlib.h>
```

returns the **string of the variable name**  
*test-env.c*