SEMINAR 10

PROCESS IMAGE REPLACEMENT

NOTE ON MAIN SIGNATURES

```
int main() { ... }
int main(int argc, char *argv[]) { ... }
int main(int argc, char *argv[], char *envp[]) { ... }
```

THE THIRD OPTION IS NOT POSIX-COMPATIBLE!
CONSIDER ENVIRON OR GETENV

REPLACING PROCESS IMAGE

```
int execve(const char *pathname, // Executable
           char *const argv[],   // Command-line arguments (NULL-terminated)
           char *const envp[])   // Environment (NULL-terminated)
```

THIS SEEMS
INCONVENIENT
IN CERTAIN CASES

WONDERFUL WORLD OF WRAPPERS

```
int execl(const char *pathname, const char *arg, ...,
                                (char *) NULL);
int execlp(const char *file, const char *arg, ...,
                                (char *) NULL);
int execle(const char *file, const char *arg, ...,
                (char *) NULL, char * const envp[]);
int execv(const char *pathname, char * const argv[]);
int execvp(const char *file, char * const argv[]);
int execvpe(const char *file, char * const argv[],
                              char * const envp[]);
```

WHAT DO LETTERS MEAN?

- L AND V – VARIADIC AND ARRAY
- P – SEARCH IN PATH
- E – SPECIFY THE ENVIRONMENT

DEMO