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## Exercise 1

Using MPI try to print out:

```
Hello world, I am proc X of total Y
```

with a total number of tasks  $Y = 4$  and  $X$  ranging from 0 to 3. After having compiled the code, try to launch it as a batch job (on FERMI: remember to cross-compile!).

*HINTS:*

### C

**MPI\_INIT**`int MPI_Init(int *argc, char ***argv)`**MPI\_COMM\_SIZE**`int MPI_Comm_size(MPI_Comm comm, int *size)`**MPI\_COMM\_RANK**`int MPI_Comm_rank(MPI_Comm comm, int *rank)`**MPI\_FINALIZE**`int MPI_Finalize(void)`

### FORTRAN

**MPI\_INIT**

```
MPI_INIT(IERROR)
INTEGER IERROR
```

**MPI\_COMM\_SIZE**

```
MPI_COMM_SIZE(COMM, SIZE, IERROR)
INTEGER COMM, SIZE, IERROR
```

**MPI\_COMM\_RANK**      `MPI_COMM_SIZE(COMM, SIZE, IERROR)`  
                         `INTEGER COMM, RANK, IERROR`

**MPI\_FINALIZE**      `MPI_FINALIZE(IERROR)`  
                         `INTEGER IERROR`

### Execution

**batch job**      `$ module help cpmd`

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