First MPI Program

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On this lecture we are going to construct our first program in MPI.

Basic MPI Functions

- MPI_Init: initializes MPI execution environment.

- MPI_Finalize: finalizes MPI execution environment.

- MPI_Comm_rank: retrieves the process identifier.

- MPI_Comm_size: retrieves the number of processes.

Simple Example of argc and argv

```c
#include <stdio.h>

int main(int argc, char **argv) {
    printf("Argument count (argc): %d\n", argc);

    for (int i = 0; i < argc; i++) {
        printf("Argument %d: %s\n", i, argv[i]);
    }

    return 0;
}
```

Simple Example of argc and argv

If we run the program with this command:

```
./program word1 word2 word3
```

👉

```
Argument count (argc): 4
Argument 0: ./program
Argument 1: word1
Argument 2: word2
Argument 3: word3
```