greetings_rankX10.c 28/04/2023 18:26

```
#include <stdio.h>
    #include <string.h>
    #include "mpi.h'
4
    int main(int argc, char** argv) {
                                      /* rank of process
                                                                * /
6
         int
                      my_rank;
                      rank_x_10; /* rank of process times 10 */
received_rank_x_10; /* rank of process times 10
         int
8
         int
                                        \overline{/}* number of processes */
9
         int
                                        /* rank of sender
/* rank of receiver
         int
                       source;
                                                                     */
         int
                       dest;
                                                                    */
                       tag = 0;
                                        /* tag for messages
        int
                       message[100]; /* storage for message */
status; /* return status for */
         //char
14
        MPI Status status;
                                         /* receive
15
16
        MPI Request request;
17
18
         printf("Questo programma è bello\n");
19
         MPI Comm size (MPI COMM WORLD, &p);
21
         /* Start up MPI */
23
         MPI Init(&argc, &argv);
24
         /* Find out process rank */
26
         MPI_Comm_rank(MPI_COMM_WORLD, &my_rank);
27
28
         /* Find out number of processes */
29
         MPI Comm size (MPI COMM WORLD, &p);
         if (my_rank != 0) { // slave
    /* Create message */
31
32
             dest = 0;
             rank_x_10 = my_rank * 10 ; // supercalcolo LOL!
MPI_Send(&rank_x_10, 1, MPI_INT, dest, tag, MPI_COMM_WORLD);
34
             ran\overline{k}_x_{10} = 66\overline{6};
36
        } else { /* my rank == 0 */
38
39
             for (source = 1; source < p; source++) {</pre>
40
                  // Provare con e senza tag MPI ANY SOURCE ;)
41
                  MPI_Recv(&received_rank_x_10, 1, MPI_INT, source, tag, MPI_COMM_WORLD, &status);
42
                  printf("Received %d rank10 from source %d\n", received_rank_x_10, status.MPI_SOURc
43
              }
44
         }
45
         /* Shut down MPI */
46
47
        MPI_Finalize();
48
    } /* main */
49
```