

Riphah International University



MS MPI

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```
#include
<iostream>
#include
<mpi.h>
#include
<vector>

int main(int argc, char** argv) {
    MPI_Init(&argc, &argv);

    int world_size;
    MPI_Comm_size(MPI_COMM_WORLD,
        &world_size);

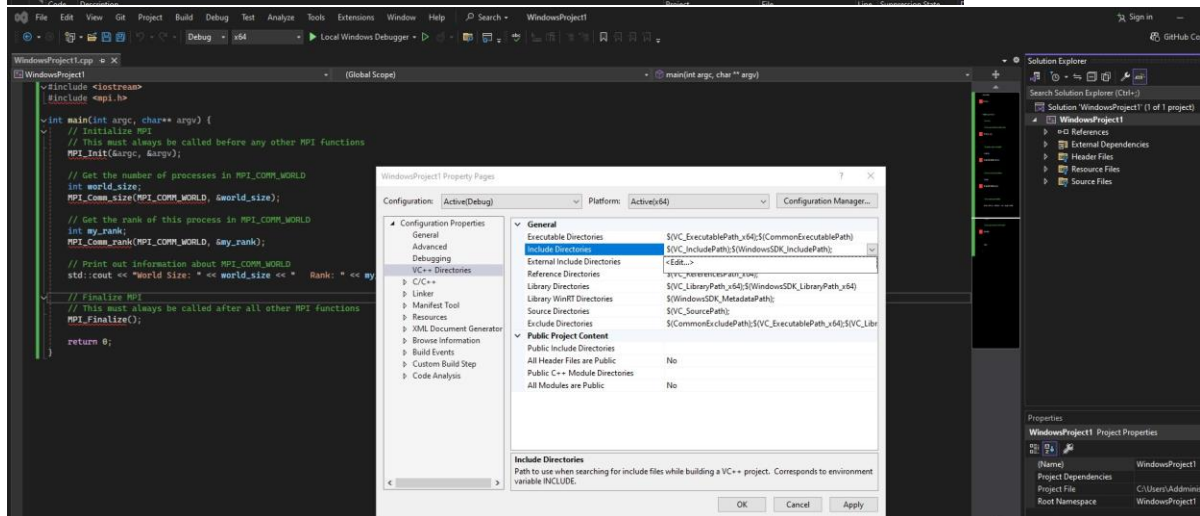
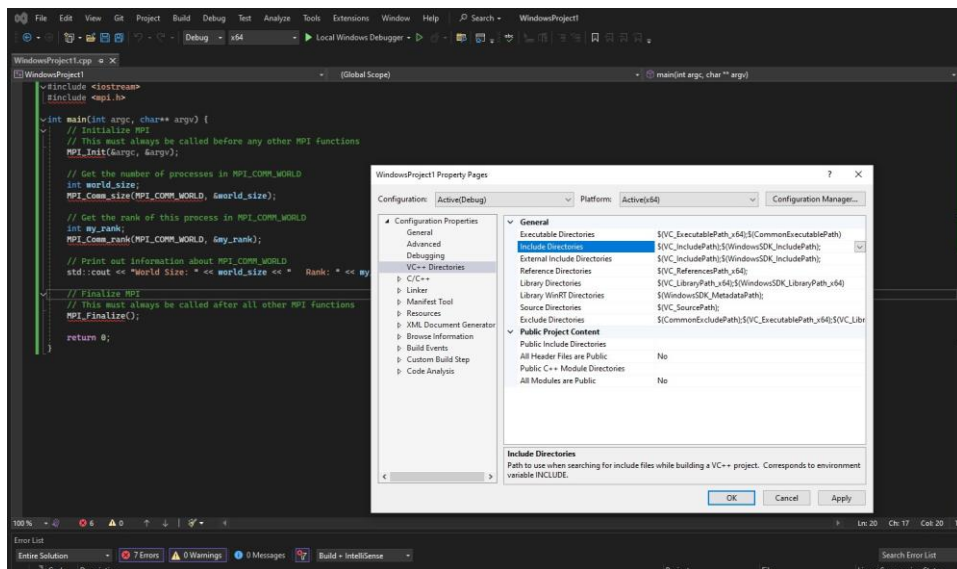
    int my_rank;
    MPI_Comm_rank(MPI_COMM_WORLD,
        &my_rank);

    char
    processor_name[MPI_MAX_PROCESSOR_NAME]; int
    name_len;
    MPI_Get_processor_name(processor_name,
        &name_len);

    std::cout << "Process " << my_rank << " of " << world_size
        << " is running on machine: " << processor_name << std::endl;

    MPI_Finalize();

    return 0;}
```



```
-4 Force using IPv4.  
-6 Force using IPv6.
```

```
C:\Windows\system32>hostname  
DESKTOP-90Q2TE2
```

```
C:\Windows\system32>ping systemlab2-37
```

```
Pinging systemlab2-37.local [fe80::de95:ca5e:7e1d:4489%6] with 32 bytes of data:  
Reply from fe80::de95:ca5e:7e1d:4489%6: time=1ms  
Reply from fe80::de95:ca5e:7e1d:4489%6: time=1ms  
Reply from fe80::de95:ca5e:7e1d:4489%6: time=1ms  
Reply from fe80::de95:ca5e:7e1d:4489%6: time=1ms
```

```
Ping statistics for fe80::de95:ca5e:7e1d:4489%6:  
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  
Approximate round trip times in milli-seconds:  
Minimum = 1ms, Maximum = 1ms, Average = 1ms
```

```
C:\Windows\system32>start smpd -d
```

```
C:\Windows\system32>_
```

```
2  #include <mpi.h>  
3  #include <vector>  
4  
5  int main(int argc, char** argv) {  
6      MPI_Init(&argc, &argv);  
7  
8      int world_size;  
9      MPI_Comm_size(MPI_COMM_WORLD, &world_size);  
10  
11     int my_rank;  
12     MPI_Comm_rank(MPI_COMM_WORLD, &my_rank);  
13  
14     char processor_name[MPI_MAX_PROCESSOR_NAME];  
15     int name_len;  
16     MPI_Get_processor_name(processor_name, &name_len);  
17  
18     std::cout << "Process " << my_rank << " of " << world_size  
19         << " is running on machine: " << processor_name << std::endl;  
20  
21     MPI_Finalize();  
22  
23     return 0;  
24 }
```

100 % No issues found

Developer PowerShell

+ Developer PowerShell

Error (2) The system cannot find the file specified.

PS C:\Users\Administrator\source\repos\ms_mpi\x64\Debug> Mpiexec -machinefile machines.txt -np 4 ms_mpi.exe

Process 1 of 4 is running on machine: systemlab2-18

Process 3 of 4 is running on machine: systemlab2-18

Process 0 of 4 is running on machine: systemlab2-20

Process 2 of 4 is running on machine: systemlab2-20

PS C:\Users\Administrator\source\repos\ms_mpi\x64\Debug>