Write a MPI Program to demonstration of Broadcast operation.

```
#include <mpi.h>
#include <stdio.h>
int main(int argc, char** argv) {
   MPI_Init(&argc, &argv);  // Initialize the MPI environment
   int rank, size;
   int data;
   MPI_Comm_rank(MPI_COMM_WORLD, &rank);  // Get current process ID
   MPI_Comm_size(MPI_COMM_WORLD, &size);  // Get total number of processes
   if (rank == 0) {
      data = 2025;  // Root process initializes the data
      printf("Process 0 is broadcasting data: %d\n", data);
   }
   // Broadcast the value of `data` from process 0 to all other processes
   MPI_Bcast(&data, 1, MPI_INT, 0, MPI_COMM_WORLD);
   // Now all processes have the same value
   printf("Process %d received data: %d\n", rank, data);
   MPI_Finalize();  // Finalize the MPI environment
   return 0;
}
```

```
mpicc broadcast_demo.c -o broadcast_demo
mpirun ./broadcast_demo
Process 0 is broadcasting data: 2025
Process 0 received data: 2025
Process 1 received data: 2025
```