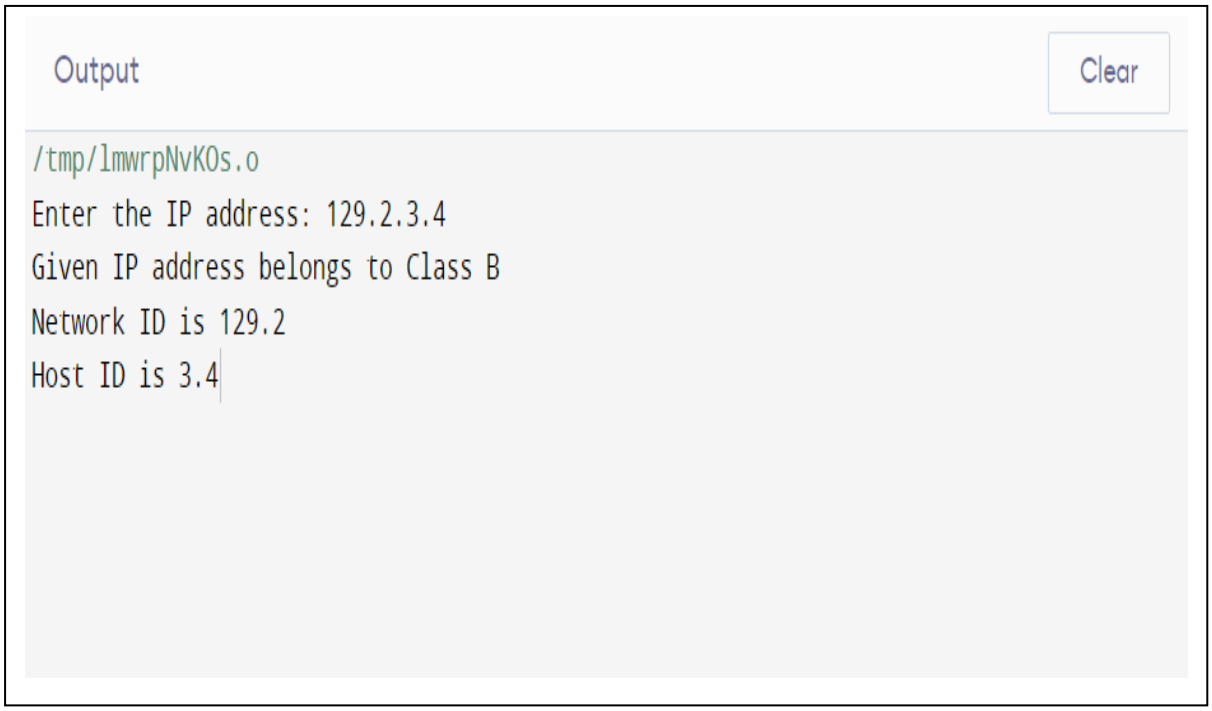
CODE:

```
#include <stdio.h>
#include <string.h>
char findClass(char str[]) {
 char arr[4];
 int i = 0;
 while (str[i] != '.') {
 arr[i] = str[i];
 i++;
 }
 i--;
 int ip = 0, j = 1;
 while (i >= 0) {
 ip = ip + (str[i] - '0') * j;
 j = j * 10;
 i--;
 }
 if (ip >=1 && ip <= 126)
 return 'A';
 else if (ip >= 128 && ip <= 191)
 return 'B';
 else if (ip >= 192 && ip <= 223)
 return 'C';
 else if (ip >= 224 && ip <= 239)
 return 'D';
 else
 return 'E';
}
void separate(char str[], char ipClass) {
 char network[12], host[12];
 for (int k = 0; k < 12; k++)
 network[k] = host[k] = '\0';
 if (ipClass == 'A') {
 int i = 0, j = 0;
 while (str[j] != '.')
 network[i++] = str[j++];
 i = 0;
 j++;
 while (str[j] != '\0')
 host[i++] = str[j++];
 printf("Network ID is %s\n", network);
 printf("Host ID is %s\n", host);
 }
```

```
 else if (ipClass == 'B') {
 int i = 0, j = 0, dotCount = 0;
 while (dotCount < 2) {
 network[i++] = str[j++];
 if (str[j] == '.')
 dotCount++;
 }
 i = 0;
 j++;
 while (str[j] != '\0')
 host[i++] = str[j++];
 printf("Network ID is %s\n", network);
 printf("Host ID is %s\n", host);
 }
 else if (ipClass == 'C') {
 int i = 0, j = 0, dotCount = 0;
 while (dotCount < 3) {
 network[i++] = str[j++];
 if (str[j] == '.')
 dotCount++;
 }
 i = 0;
 j++;
 while (str[j] != '\0')
 host[i++] = str[j++];
 printf("Network ID is %s\n", network);
 printf("Host ID is %s\n", host);
 }
 else
 printf("In this Class, IP address is not"
 " divided into Network and Host ID\n");
}
int main() {
 char str[20];
 printf("Enter the IP address: ");
 scanf("%s", str);
 char ipClass = findClass(str);
 printf("Given IP address belongs to Class %c\n", ipClass);
 separate(str, ipClass);
 return 0;
}
```

OUTPUT:


Output
Clear
/tmp/lmwrpNvKOs.o
Enter the IP address: 129.2.3.4
Given IP address belongs to Class B
Network ID is 129.2
Host ID is 3.4