Code Translation

Characters With Binary Value

Character	ASCII Decimal	Binary (7-bit)
`#`	35	`0100011`
`i`	105	`1101001`
`n`	110	`1101110`
`c`	99	`1100011`
`l`	108	`1101100`
`u`	117	`1110101`
`d`	100	`1100100`
`e`	101	`1100101`
`SP`	32	`0100000`
`<`	60	`0111100`
`s`	115	`1110011`
`t`	116	`1110100`
`o`	111	`1101111`
`.`	46	`0101110`
`h`	104	`1101000`
`>`	62	`0111110`
`\n`	10	`0001010`
`j`	106	`1101010`
`m`	109	`1101101`
`a`	97	`1100001`
`(`	40	`0101000`

Character	ASCII Decimal	Binary (7-bit)
`)`	41	`0101001`
`{`	123	`1111011`
`p`	112	`1110000`
`r`	114	`1110010`
`f`	102	`1100110`
`"`	34	`0100010`
`,`	44	`0101100`
`w`	119	`1110111`
`;`	59	`0111011`
`0`	48	`0110000`
`}`	125	`1111101`

Program Translated into Binary Code

```
#       i       n       c       l       u       d       e               <       s
0100011 1101001 1101110 1101110 1100011 1110101 1110101 1100101 0100000 0111100 111001
i       o       .       h       >       \n
1101001 1101111 0101110 1101000 0111110 0001010

i       n       t               m       a       i       n       (       )       {
1101001 1101110 1110100 0100000 1101101 1100001 1101001 1101110 0101000 0101001 111101
p       r       i       n       t       f       (       "       h       e       l
1110000 1110010 1101001 1101110 1110100 1100110 0101000 0100010 1101000 1100101 110001
o       ,               w       o       r       l       d       \n      "       )
1101111 0101100 0100000 1110111 1101111 1110010 1100011 1100100 0001010 0100010 010100
r       e       t       u       r       n       0       ;
1110010 1100101 1110100 1110101 1110010 1101110 0110000 0111011

}
1111101
```

Seprate Code

C Code

```c
#include <stdio.h>

int main() {

    printf("hello, world\n");

    return 0;
}
```

Binary Code

```
0100011 1101001 1101110 1101110 1100011 1110101 1110101 1100101 0100000 0111100 111001

1101001 1101110 1110100 0100000 1101101 1100001 1101001 1101110 0101000 0101001 111101

1110000 1110010 1101001 1101110 1110100 1100110 0101000 0100010 1101000 1100101 110001

1110010 1100101 1110100 1110101 1110010 1101110 0110000 0111011

1111101
```

Difference

C Code	Binary Equivalent
#include <stdio.h>	0100011 1101001 1101110 1101110 1100011 1110101 1110101 1100101 0100000 0111100 1110011 1110100 1100100 1101001 1101111 0101110 1101000 0111110 0001010
int main() {	1101001 1101110 1110100 0100000 1101101 1100001 1101001 1101110 0101000 0101001 1111011 0001010
printf("hello, world\n");	1110000 1110010 1101001 1101110 1110100 1100110 0101000 0100010 1101000 1100101 1100011 1100011 1101111 0101100 0100000 1110111 1101111 1110010 1100011 1100100 0001010 0100010 0101001 0111011

C Code	Binary Equivalent
return 0;	1110010 1100101 1110100 1110101 1110010 1101110 0110000 0111011
}	1111101