

C programming language

Jeremy Iverson

College of Saint Benedict & Saint John's University



Dennis Ritchie in 2011 / CC BY 2.0



Brian Kernighan in 2012 / CC BY 2.0

comparison

Java	C
object-oriented	procedural
interpreted	compiled
String	char array
condition (boolean)	condition (int)
garbage-collected	no memory management
references	pointers
exceptions	error codes

hello, world

```
1 #include <stdio.h>
2
3 int main() {
4     printf("hello, world\n");
5     return 0;
6 }
```

```
$ gcc -o helloworld helloworld.c
$ ./helloworld
hello, world
```

conditions

- under what conditions will each of the following be execute?

```
1  if (x) {  
2      /* ??? */  
3  }  
4  if (x-y) {  
5      /* ??? */  
6  }  
7  if (x=y) {  
8      /* ??? */  
9  }
```

add evens

- create program called `addEven.c` that adds all the even numbers between 1 and 100 and prints the sum

add evens cont.

- modify `addEven.c` to get maximum value from the command-line instead of hard-coded as 100

```
1 #include <stdio.h>
2
3 int main(int argc, char * argv[]) {
4     printf("(%d) %s:%s\n", argc, argv[0],
5         argv[1]);
6     return 0;
7 }
```



except where otherwise noted, this worked is licensed under creative commons attribution-sharealike 4.0 international license