Princeton University
COS 217: Introduction to Programming Systems
Trace of testexec

```
% gcc217 hello.c -o hello
% gcc217 testexec.c -o testexec
```

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Trace of testexec

```
% ./testexec
```

```
22440
```

```
int main(int argc, char *argv[])
{
   char *apcArgv[2];
   printf("%d testexec\n", (int)getPid());
   apcArgv[0] = "./hello";
   apcArgv[1] = NULL;
   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
}
```

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```
% ./testexec
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```
22440
```

```
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22440
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}
```

Writes:

```
22440 testexec
```

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```
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```
22440
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22440
```

```
int main(void)
{
   pid_t iPid;
   iPid = getpid();
   printf("%d hello\n", (int)iPid);
   return 0;
}
```

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22440
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Writes:

```
22440 hello
```

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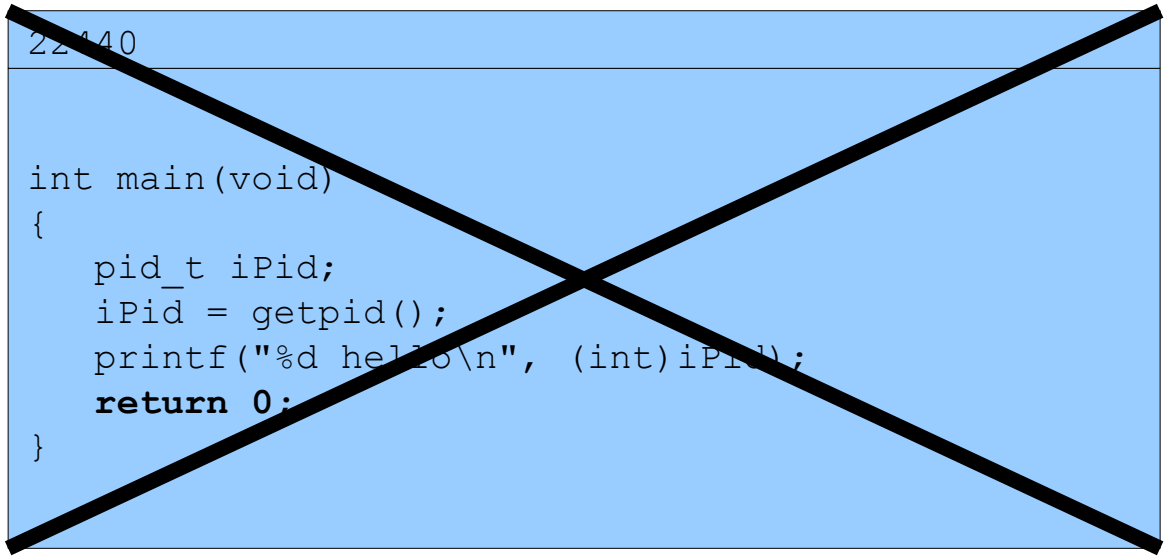
```
% ./testexec
```



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Trace of testexec

```
%
```

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Trace of testexec

```
% mv hello nothello
```

Princeton University
COS 217: Introduction to Programming Systems
Trace of testexec

```
% ./testexec
```

```
22454
```

```
int main(int argc, char *argv[])
{
   char *apcArgv[2];
   printf("%d testexec\n", (int)getPid);
   apcArgv[0] = "./hello";
   apcArgv[1] = NULL;
   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
}
```

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Trace of testexec

```
% ./testexec
```

```
22454
```

```
int main(int argc, char *argv[])
{
   char *apcArgv[2];
   printf("%d testexec\n", (int)getPid());
   apcArgv[0] = "./hello";
   apcArgv[1] = NULL;
   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
}
```

Princeton University
COS 217: Introduction to Programming Systems
Trace of testexec

```
% ./testexec
```

```
22454
```

```
int main(int argc, char *argv[])
{
   char *apcArgv[2];
   printf("%d testexec\n", (int)getPid());
   apcArgv[0] = "./hello";
   apcArgv[1] = NULL;
   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
}
```

Writes:

```
22454 testexec
```

Princeton University
COS 217: Introduction to Programming Systems
Trace of testexec

```
% ./testexec
```

```
22454
```

```
int main(int argc, char *argv[])
{
   char *apcArgv[2];
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   apcArgv[0] = "./hello";
   apcArgv[1] = NULL;
   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
}
```

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Trace of testexec

```
% ./testexec
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```
22454
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   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
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```

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```
% ./testexec
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22454
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Trace of testexec

```
% ./testexec
```

```
22454
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int main(int argc, char *argv[])
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   apcArgv[0] = "./hello";
   apcArgv[1] = NULL;
   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
}
```

Writes:

```
./testexec: No such file or directory
```

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Trace of testexec

```
% ./testexec
```

```
22454
```

```
int main(int argc, char *argv[])
{
   char *apcArgv[2];
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   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
}
```

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Trace of testexec

```
%
```

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Trace of testexec

```
% mv nothello hello
```

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Trace of testexec

```
% ./testexec
```

```
22463
```

```
int main(int argc, char *argv[])
{
   char *apcArgv[2];
   printf("%d testexec\n", (int)getPid());
   apcArgv[0] = "./hello";
   apcArgv[1] = NULL;
   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
}
```

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COS 217: Introduction to Programming Systems
Trace of testexec

```
% ./testexec
```

```
22463
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```
int main(int argc, char *argv[])
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   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
}
```

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Trace of testexec

```
% ./testexec
```

```
22463
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int main(int argc, char *argv[])
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   apcArgv[0] = "./hello";
   apcArgv[1] = NULL;
   execvp("./hello", apcArgv);
   perror(argv[0]);
   exit(EXIT_FAILURE);
}
```

Writes:

```
22463 testexec
```

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Trace of testexec

```
% ./testexec
```

```
22463
```

```
int main(int argc, char *argv[])
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```
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22463
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22463
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22463
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```
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{
   pid_t iPid;
   iPid = getpid();
   printf("%d hello\n", (int)iPid);
   return 0;
}
```

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Trace of testexec

```
% ./testexec
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```
22463
```

```
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   return 0;
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```
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22463
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```
int main(void)
{
   pid_t iPid;
   iPid = getpid();
   printf("%d hello\n", (int)iPid);
   return 0;
}
```

Writes:

```
22463 hello
```

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Trace of testexec

```
% ./testexec
```

```
22463
```

```
int main(void)
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```
%
```