

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

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

**Princeton University**  
**COS 217: Introduction to Programming Systems**  
**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);
}
```

**Princeton University**  
**COS 217: Introduction to Programming Systems**  
**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);
}
```

**Princeton University**  
**COS 217: Introduction to Programming Systems**  
**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);
}
```

**Writes:**

22440 testexec

**Princeton University**  
**COS 217: Introduction to Programming Systems**  
**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);
}
```

**Princeton University**  
**COS 217: Introduction to Programming Systems**  
**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);
}
```

Princeton University  
COS 217: Introduction to Programming Systems  
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);
}
```

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

```
% ./testexec
```

```
22440
```

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



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

```
% ./testexec
```

```
22440
```

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

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

```
% ./testexec
```

```
22440
```

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

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

```
% ./testexec
```

```
22440
```

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

**Writes:**

```
22440 hello
```

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

```
% ./testexec
```

```
22140  
  
int main(void)  
{  
    pid_t iPid;  
    iPid = getpid();  
    printf("%d hello\n", (int)iPid);  
    return 0;  
}
```

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

⊘

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

```
% mv hello nohello
```

**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);
}
```

**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);
}
```



**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];
    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);
}
```

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);  
}
```

**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:**

./testexec: No such file or directory

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

```
% ./testexec
```

```
22154  
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**

⌘

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

```
% mv nothello hello
```



**Princeton University**  
**COS 217: Introduction to Programming Systems**  
**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);
}
```

**Princeton University**  
**COS 217: Introduction to Programming Systems**  
**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);
}
```

**Princeton University**  
**COS 217: Introduction to Programming Systems**  
**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);
}
```

**Writes:**

22463 testexec

**Princeton University**  
**COS 217: Introduction to Programming Systems**  
**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);
}
```

**Princeton University**  
**COS 217: Introduction to Programming Systems**  
**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);
}
```

Princeton University  
COS 217: Introduction to Programming Systems  
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);
}
```

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

```
% ./testexec
```

```
22463
```

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

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

```
% ./testexec
```

```
22463
```

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



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

```
% ./testexec
```

```
22463
```

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

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

% ./testexec

22463

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

**Writes:**

22463 hello

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

```
% ./testexec
```

```
22163  
  
int main(void)  
{  
    pid_t iPid;  
    iPid = getpid();  
    printf("%d hello\n", (int)iPid);  
    return 0;  
}
```

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

⊘