

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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Writes:

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

Writes:

```
22440 hello
```

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```
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```

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

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%

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```
% mv hello nohello
```

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% ./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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% ./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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22454

```
int main(int argc, char *argv[])
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    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

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% ./testexec

22454

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

Writes:

./testexec: No such file or directory

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```

```
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]);  
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}
```

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```
% mv nothello hello
```


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

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int main(int argc, char *argv[])
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Writes:

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% ./testexec

22463

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22463
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    iPid = getpid();
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    return 0;
}
```

Writes:

```
22463 hello
```

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```
% ./testexec
```

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

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