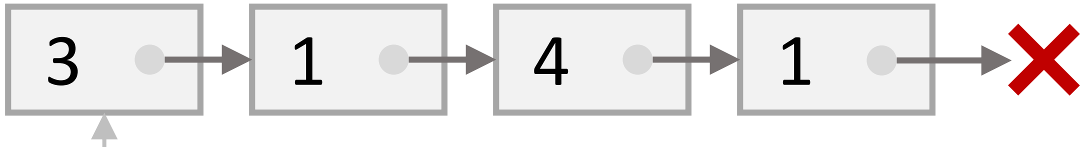
Recursion Examples

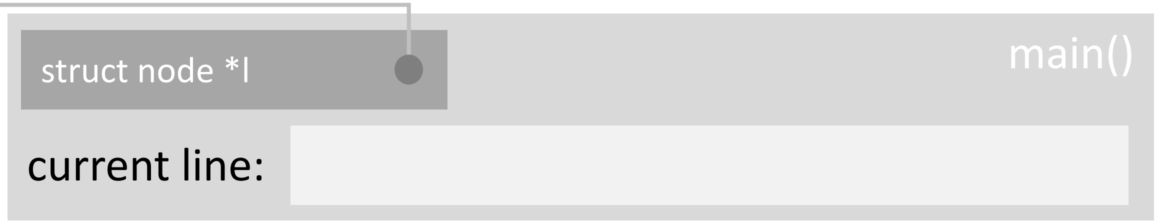
listCountOdds

listCountOdds

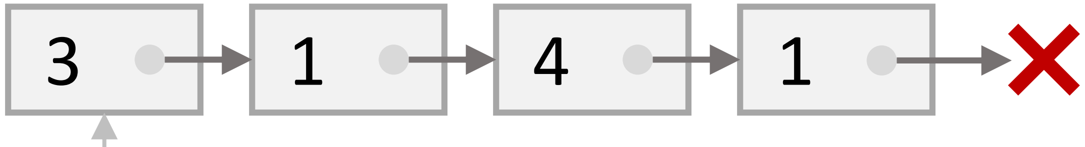


```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```

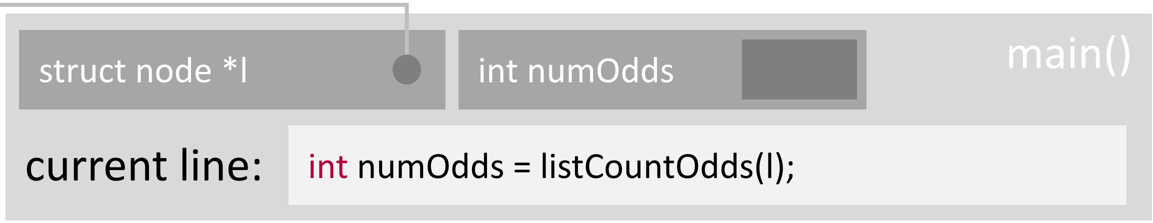


listCountOdds



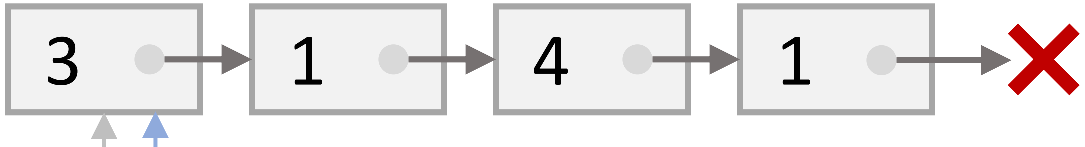
```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```



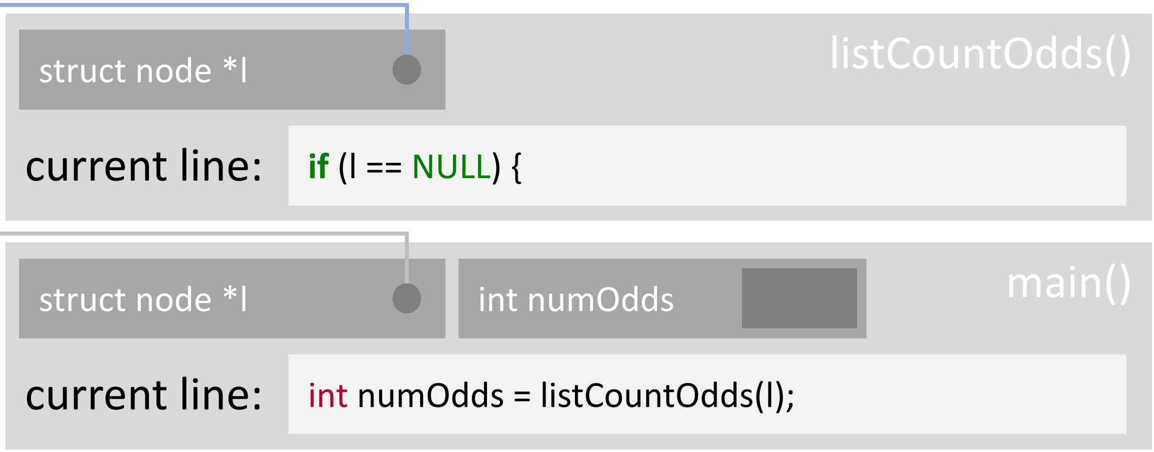
current line: int numOdds = listCountOdds(l);

listCountOdds



```
int main(void) {
   ...
   int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
   if (l == NULL) {
      return 0;
   } else if (l->value % 2 != 0) {
      return 1 + listCountOdds(l->next);
   } else {
      return listCountOdds(l->next);
   }
}
```



listCountOdds()

struct node *l

current line: `if (l == NULL) {`

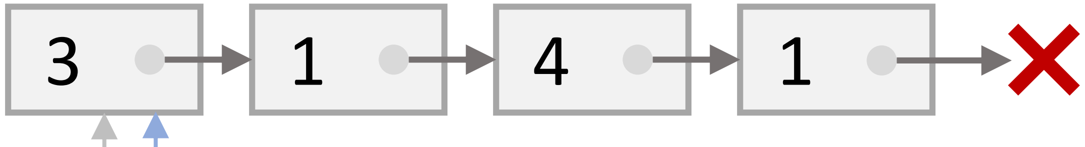
main()

struct node *l

int numOdds

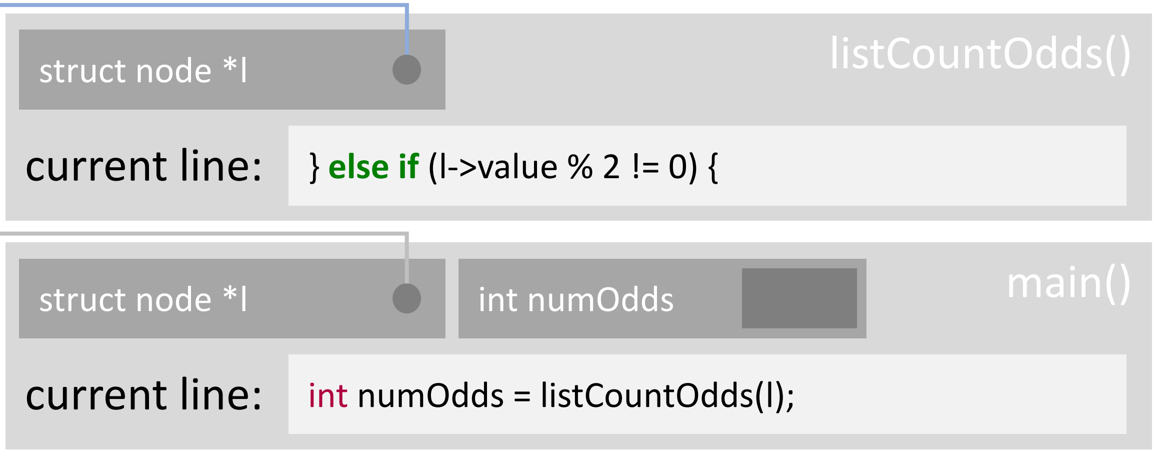
current line: `int numOdds = listCountOdds(l);`

listCountOdds



```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

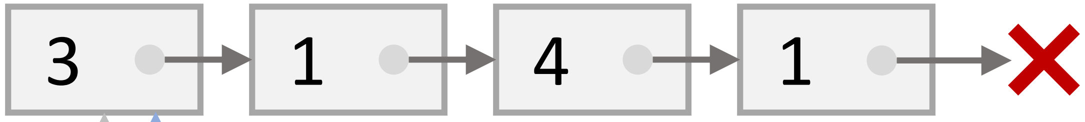
int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```



current line: } else if (l->value % 2 != 0) {

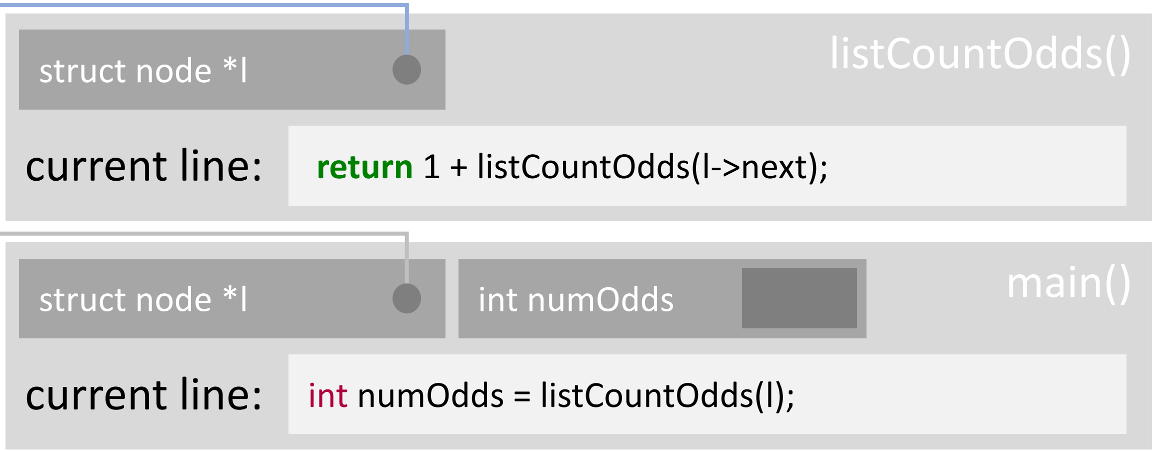
current line: int numOdds = listCountOdds(l);

listCountOdds



```
int main(void) {
   ...
   int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
   if (l == NULL) {
      return 0;
   } else if (l->value % 2 != 0) {
      return 1 + listCountOdds(l->next);
   } else {
      return listCountOdds(l->next);
   }
}
```



listCountOdds()

struct node *l

current line: `return 1 + listCountOdds(l->next);`

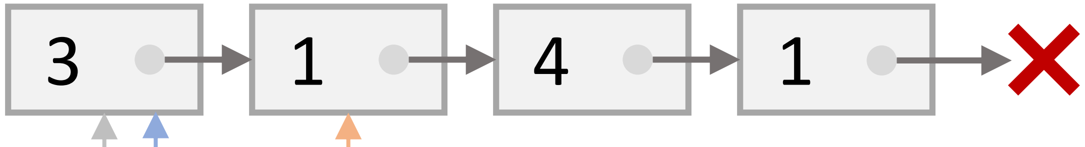
main()

struct node *l

int numOdds

current line: `int numOdds = listCountOdds(l);`

listCountOdds



```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```

listCountOdds()

struct node *l

current line: `if (l == NULL) {`

listCountOdds()

struct node *l

current line: `return 1 + listCountOdds(l->next);`

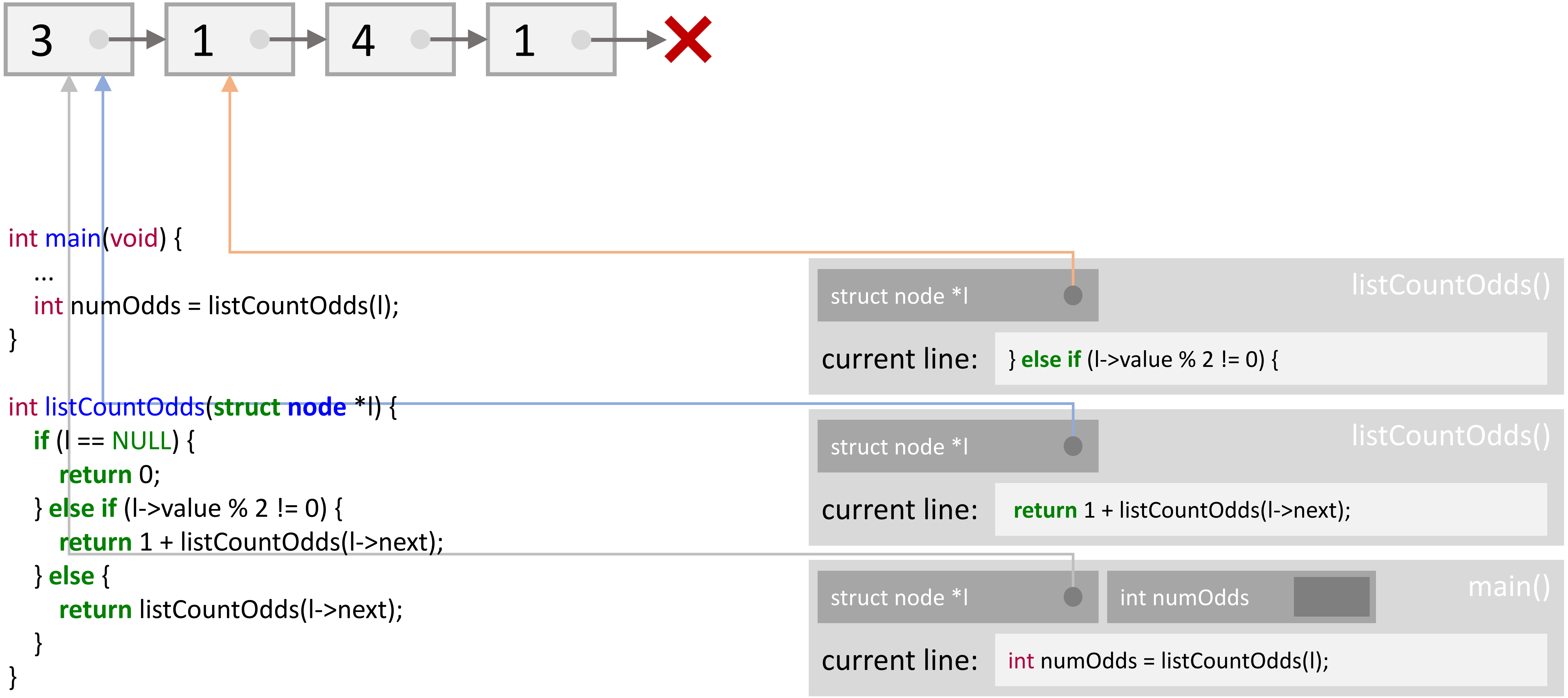
main()

struct node *l

int numOdds

current line: `int numOdds = listCountOdds(l);`

listCountOdds



```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```

listCountOdds()

struct node *l

current line: } else if (l->value % 2 != 0) {

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

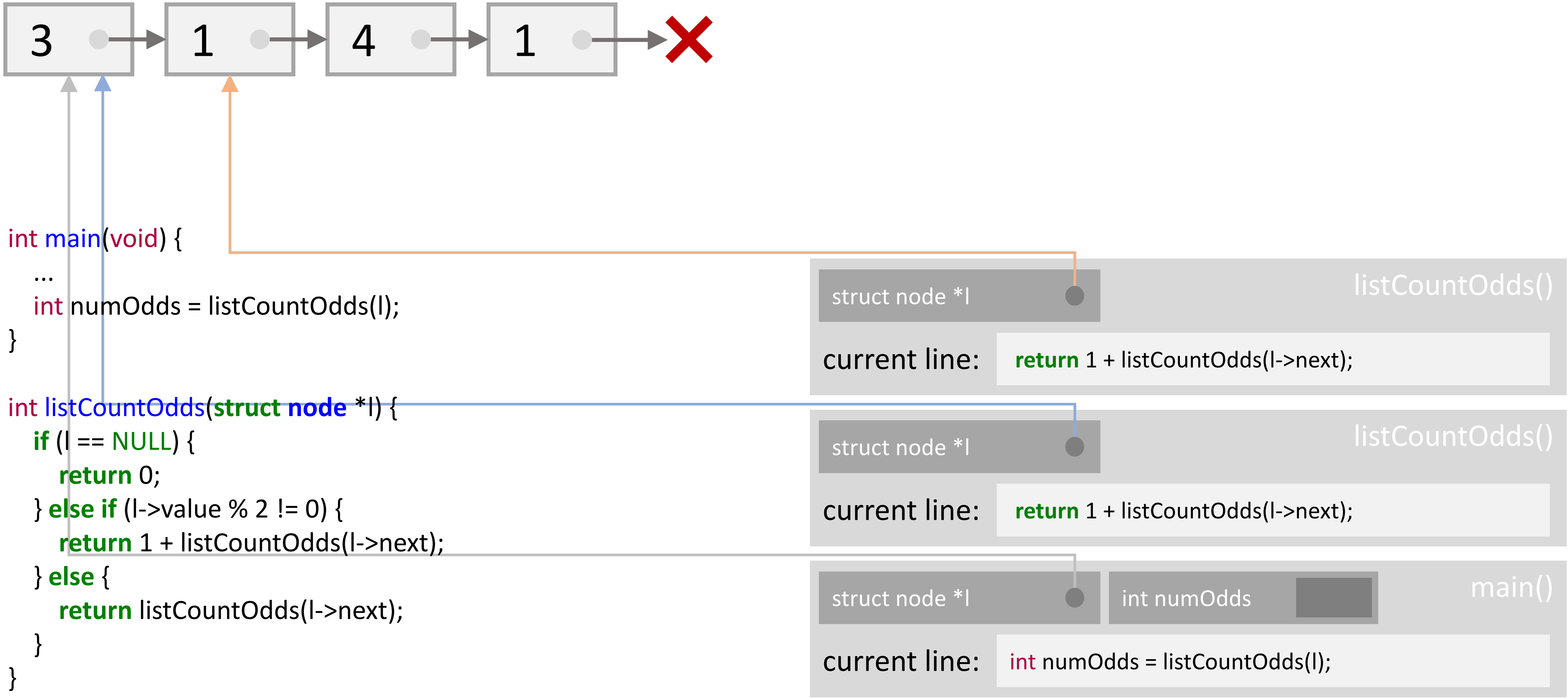
main()

struct node *l

int numOdds

current line: int numOdds = listCountOdds(l);

listCountOdds



```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
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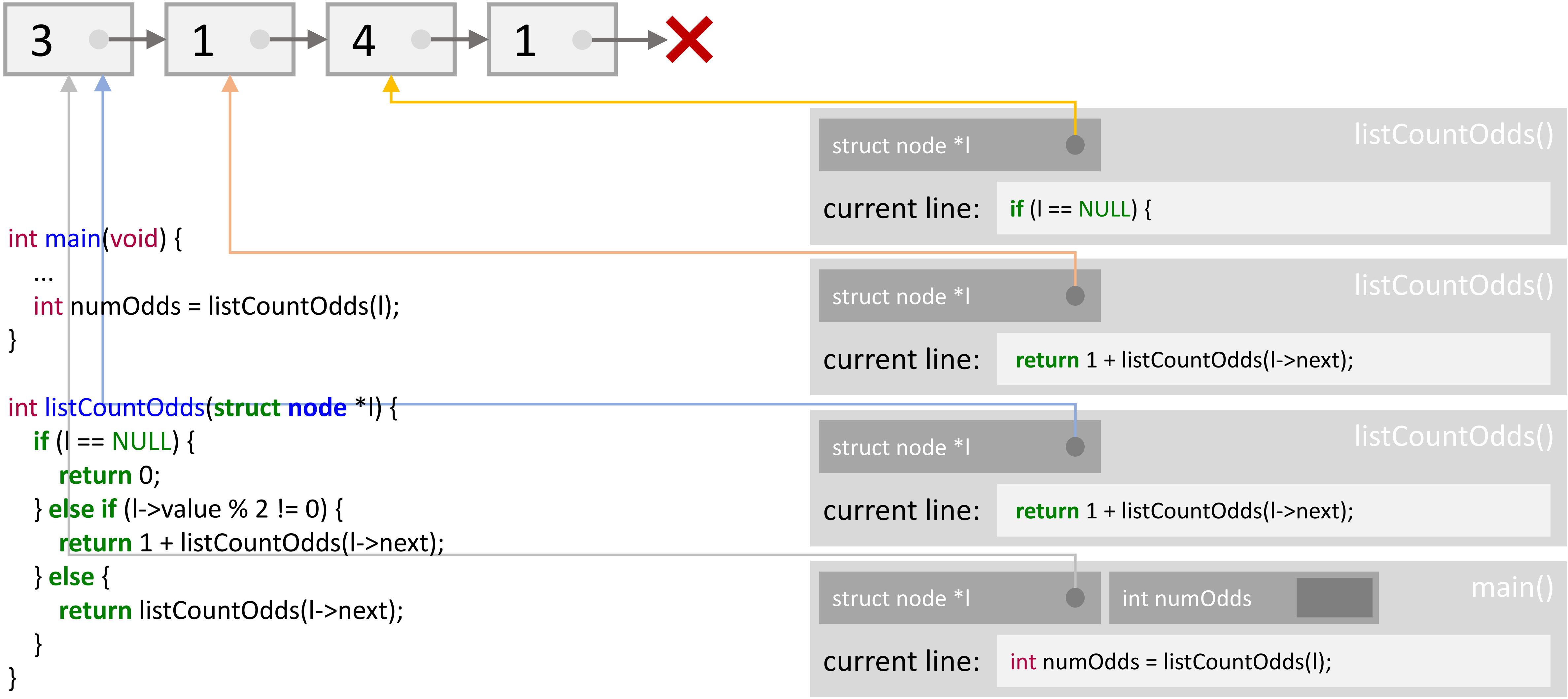
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```

listCountOdds



```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
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    }
}
```

listCountOdds()

struct node *l

current line: `if (l == NULL) {`

listCountOdds()

struct node *l

current line: `return 1 + listCountOdds(l->next);`

listCountOdds()

struct node *l

current line: `return 1 + listCountOdds(l->next);`

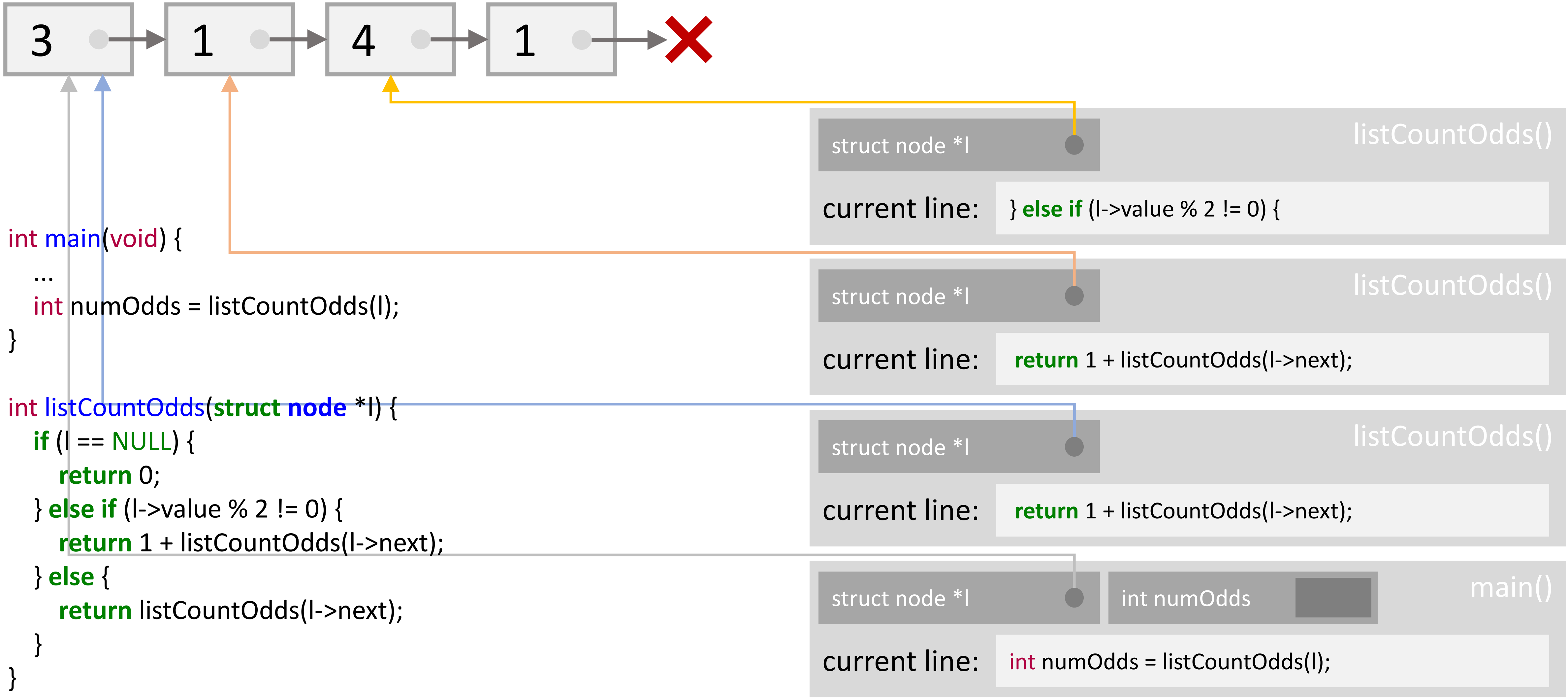
main()

struct node *l

int numOdds

current line: `int numOdds = listCountOdds(l);`

listCountOdds



current line: } else if (l->value % 2 != 0) {

current line: return 1 + listCountOdds(l->next);

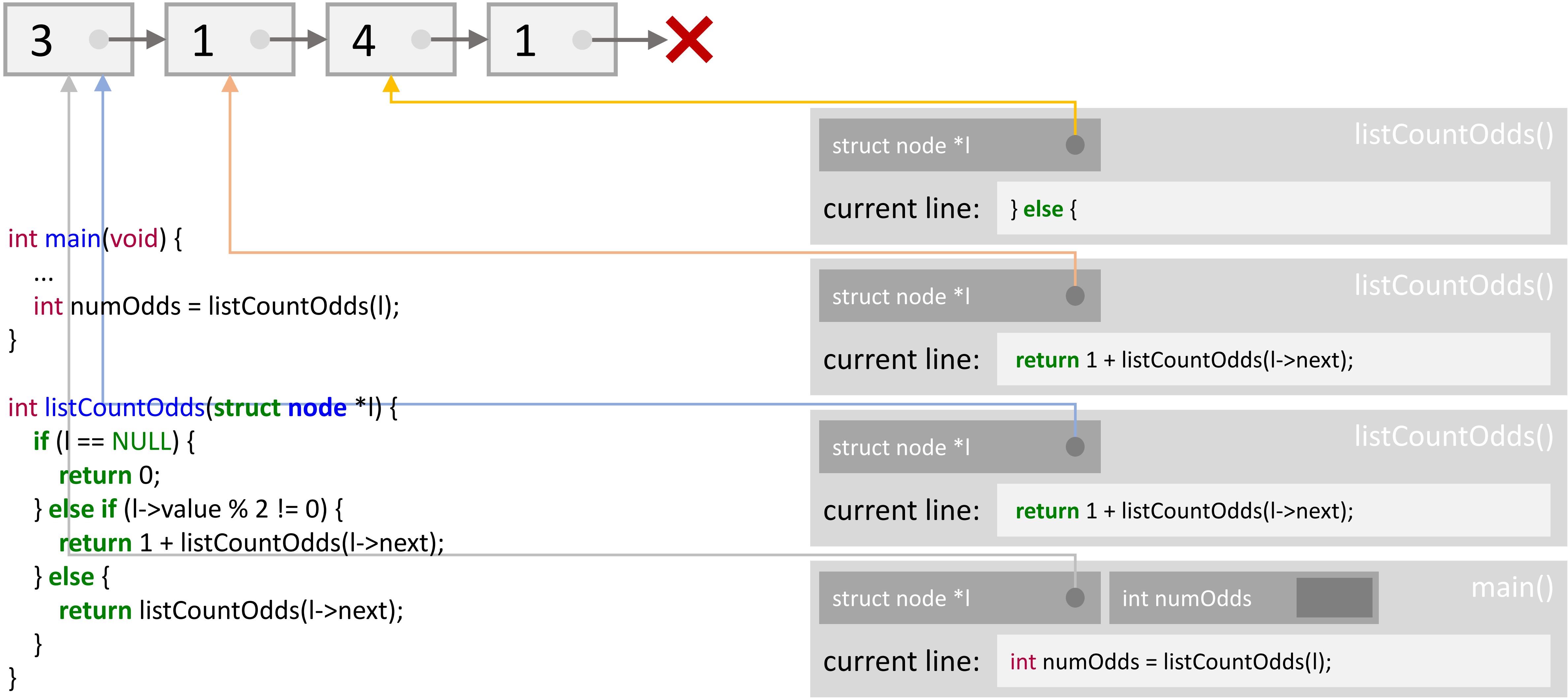
current line: return 1 + listCountOdds(l->next);

current line: int numOdds = listCountOdds(l);

```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```

listCountOdds



```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```

listCountOdds()

struct node *l

current line: } else {

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

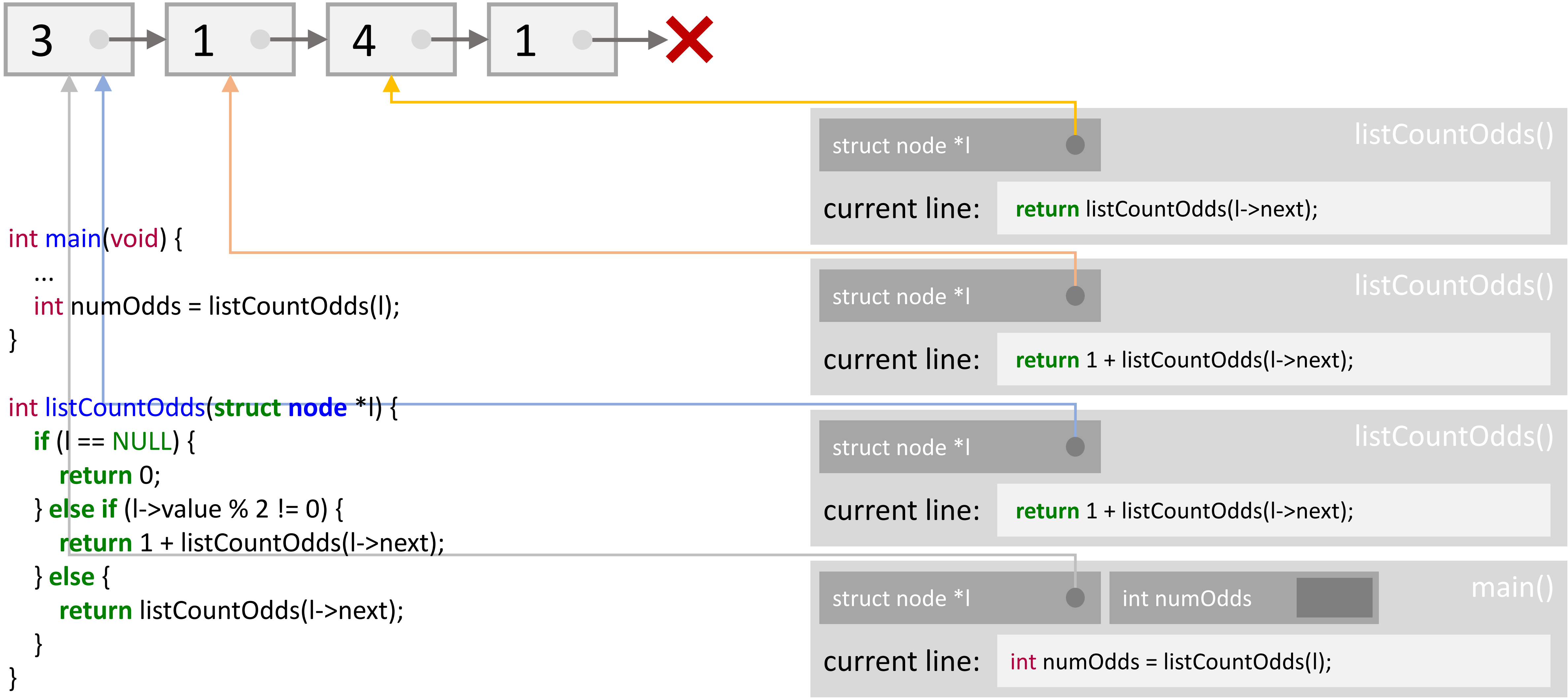
main()

struct node *l

int numOdds

current line: int numOdds = listCountOdds(l);

listCountOdds



listCountOdds()

struct node *l

current line: return listCountOdds(l->next);

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

main()

struct node *l

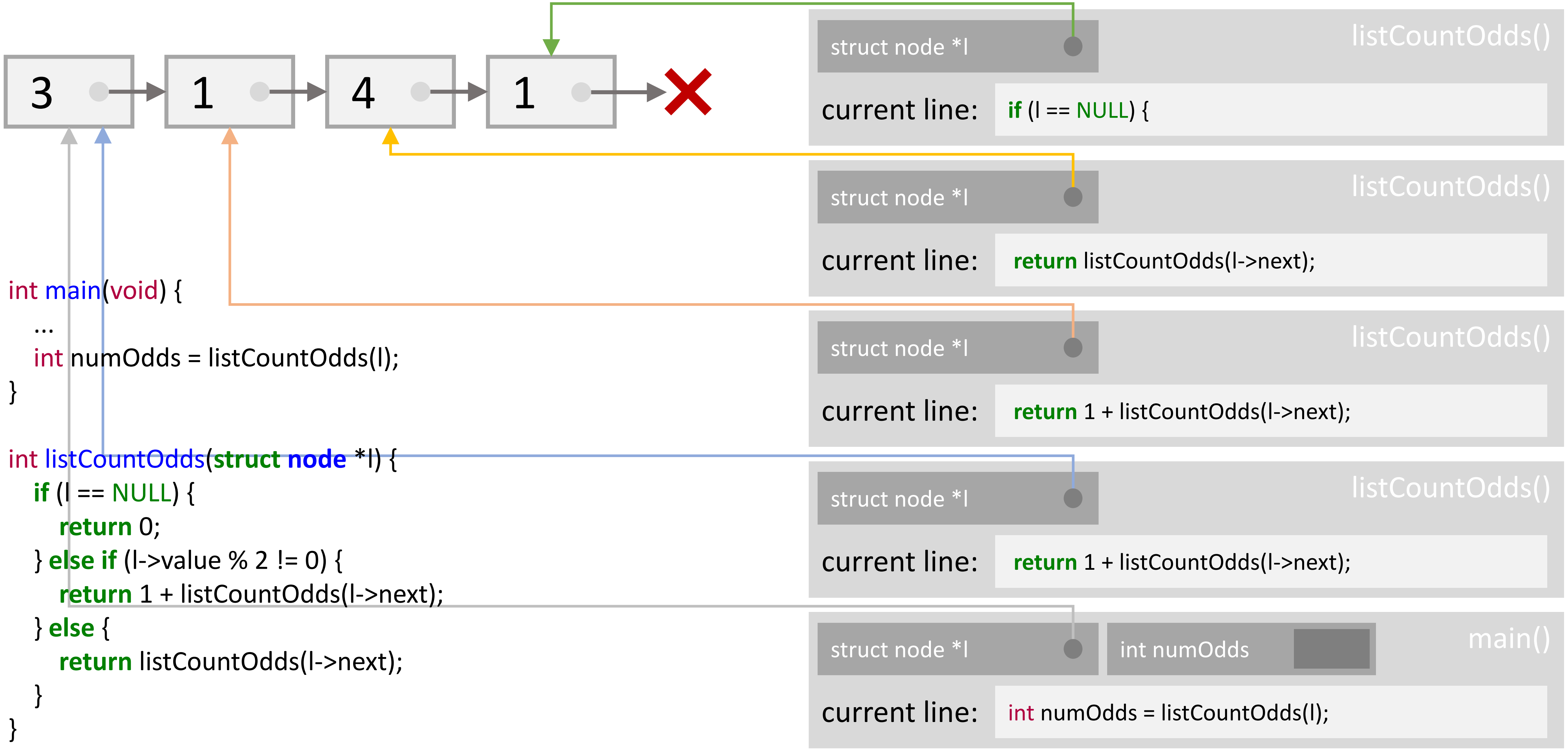
int numOdds

current line: int numOdds = listCountOdds(l);

```
int main(void) {
   ...
   int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
   if (l == NULL) {
      return 0;
   } else if (l->value % 2 != 0) {
      return 1 + listCountOdds(l->next);
   } else {
      return listCountOdds(l->next);
   }
}
```

listCountOdds



listCountOdds()
struct node *l
current line: if (l == NULL) {

listCountOdds()
struct node *l
current line: return listCountOdds(l->next);

listCountOdds()
struct node *l
current line: return 1 + listCountOdds(l->next);

listCountOdds()
struct node *l
current line: return 1 + listCountOdds(l->next);

main()
struct node *l
int numOdds
current line: int numOdds = listCountOdds(l);

```
int main(void) {
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   int numOdds = listCountOdds(l);
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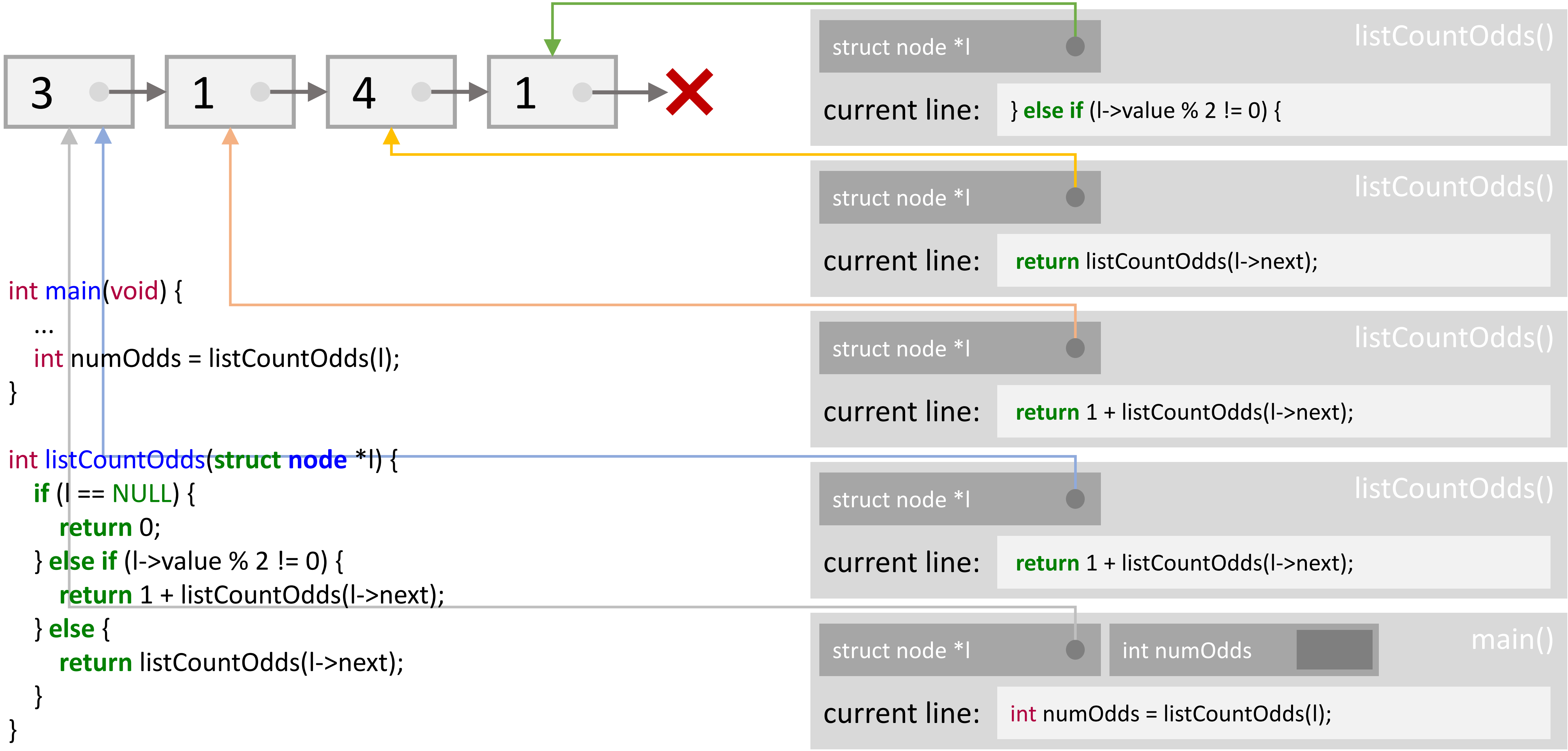
int listCountOdds(struct node *l) {
   if (l == NULL) {
      return 0;
   } else if (l->value % 2 != 0) {
      return 1 + listCountOdds(l->next);
   } else {
      return listCountOdds(l->next);
   }
}
```

listCountOdds



```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
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        return 0;
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    } else {
        return listCountOdds(l->next);
    }
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```

listCountOdds()

struct node *l

current line: } else if (l->value % 2 != 0) {

listCountOdds()

struct node *l

current line: return listCountOdds(l->next);

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

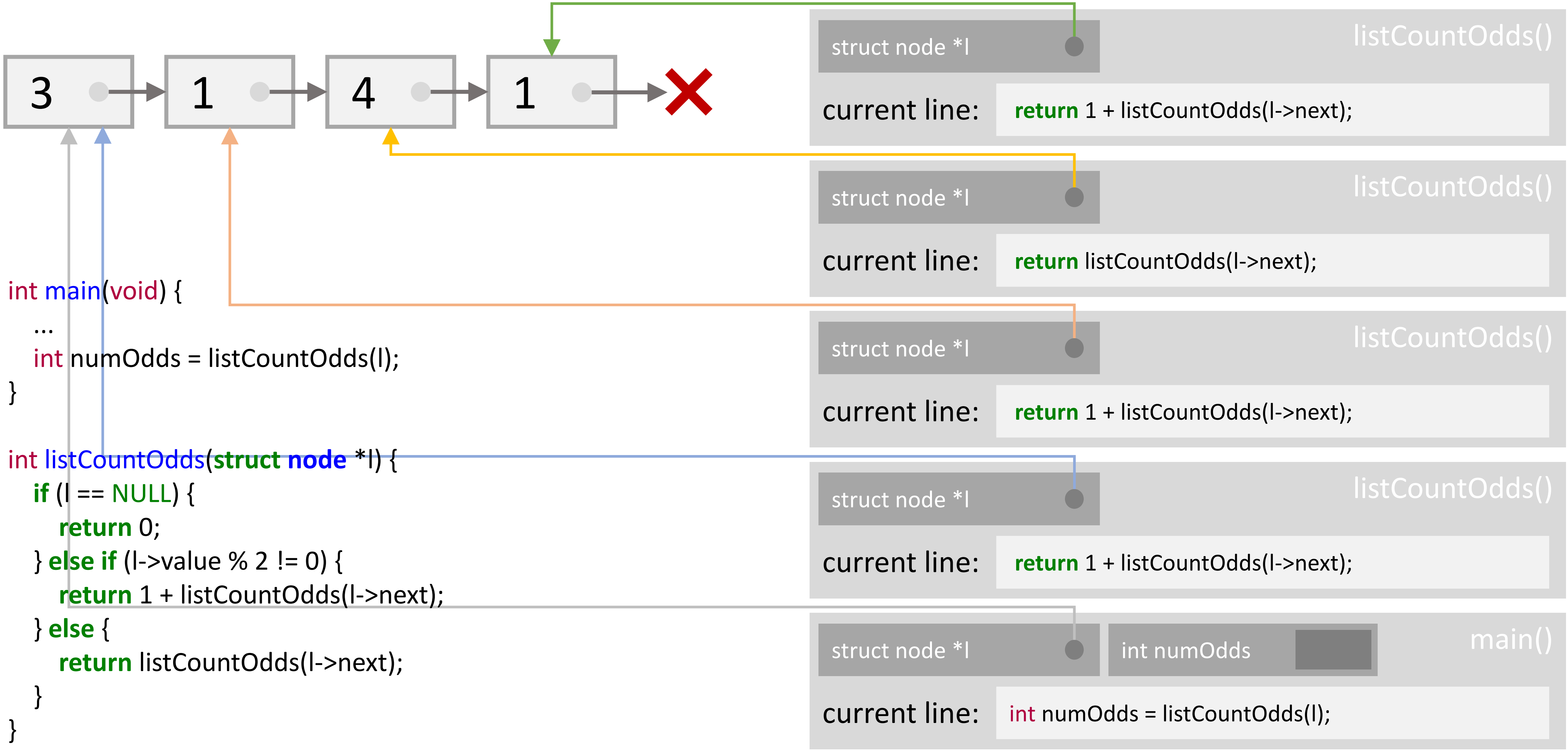
main()

struct node *l

int numOdds

current line: int numOdds = listCountOdds(l);

listCountOdds



current line: return 1 + listCountOdds(l->next);

current line: return listCountOdds(l->next);

current line: return 1 + listCountOdds(l->next);

current line: return 1 + listCountOdds(l->next);

current line: int numOdds = listCountOdds(l);

```
int main(void) {
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   int numOdds = listCountOdds(l);
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int listCountOdds(struct node *l) {
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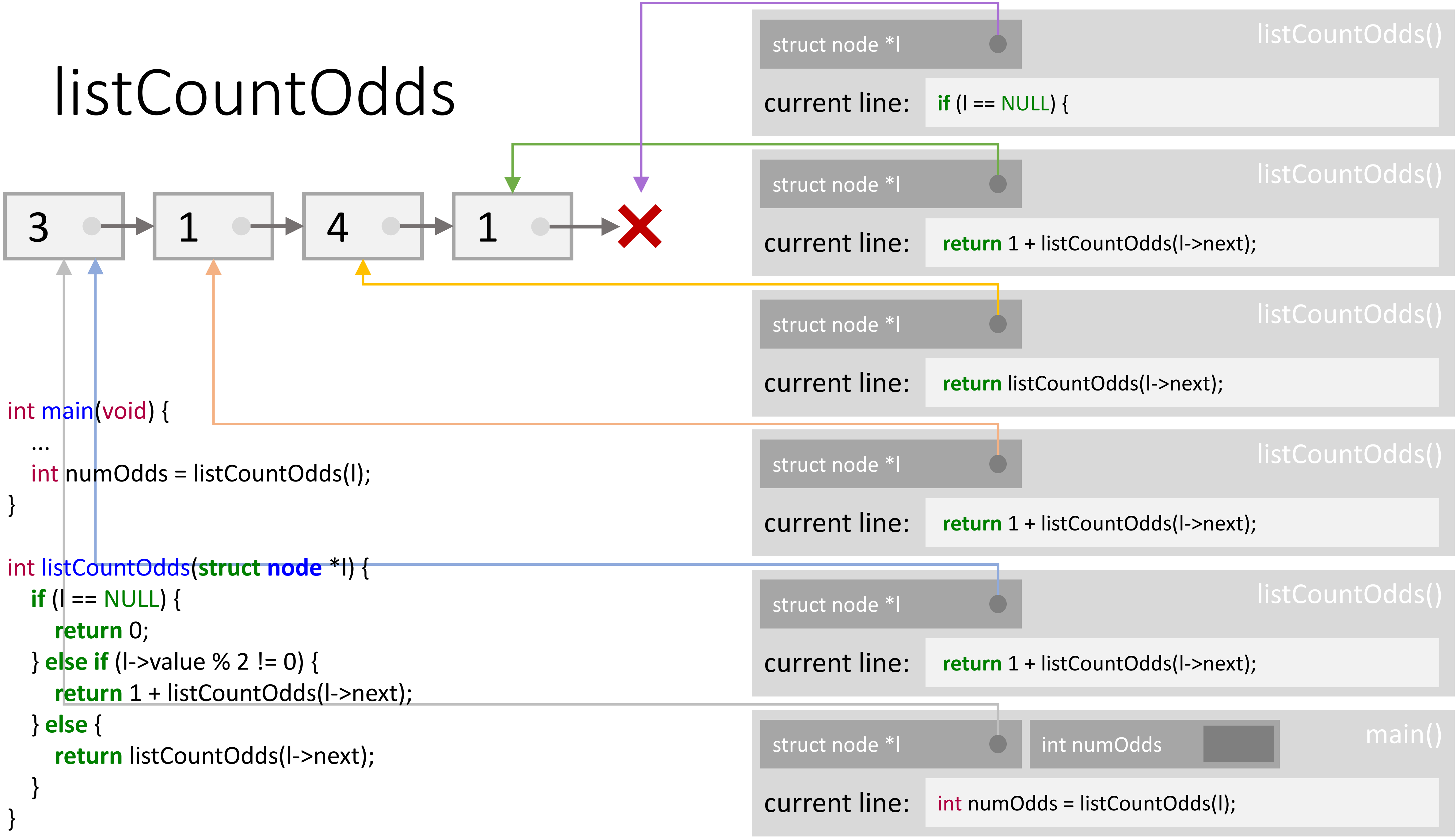
      return 0;
   } else if (l->value % 2 != 0) {
      return 1 + listCountOdds(l->next);
   } else {
      return listCountOdds(l->next);
   }
}
```

listCountOdds



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   } else {
      return listCountOdds(l->next);
   }
}
```

listCountOdds()

struct node *l

current line: `if (l == NULL) {`

listCountOdds()

struct node *l

current line: `return 1 + listCountOdds(l->next);`

listCountOdds()

struct node *l

current line: `return listCountOdds(l->next);`

listCountOdds()

struct node *l

current line: `return 1 + listCountOdds(l->next);`

listCountOdds()

struct node *l

current line: `return 1 + listCountOdds(l->next);`

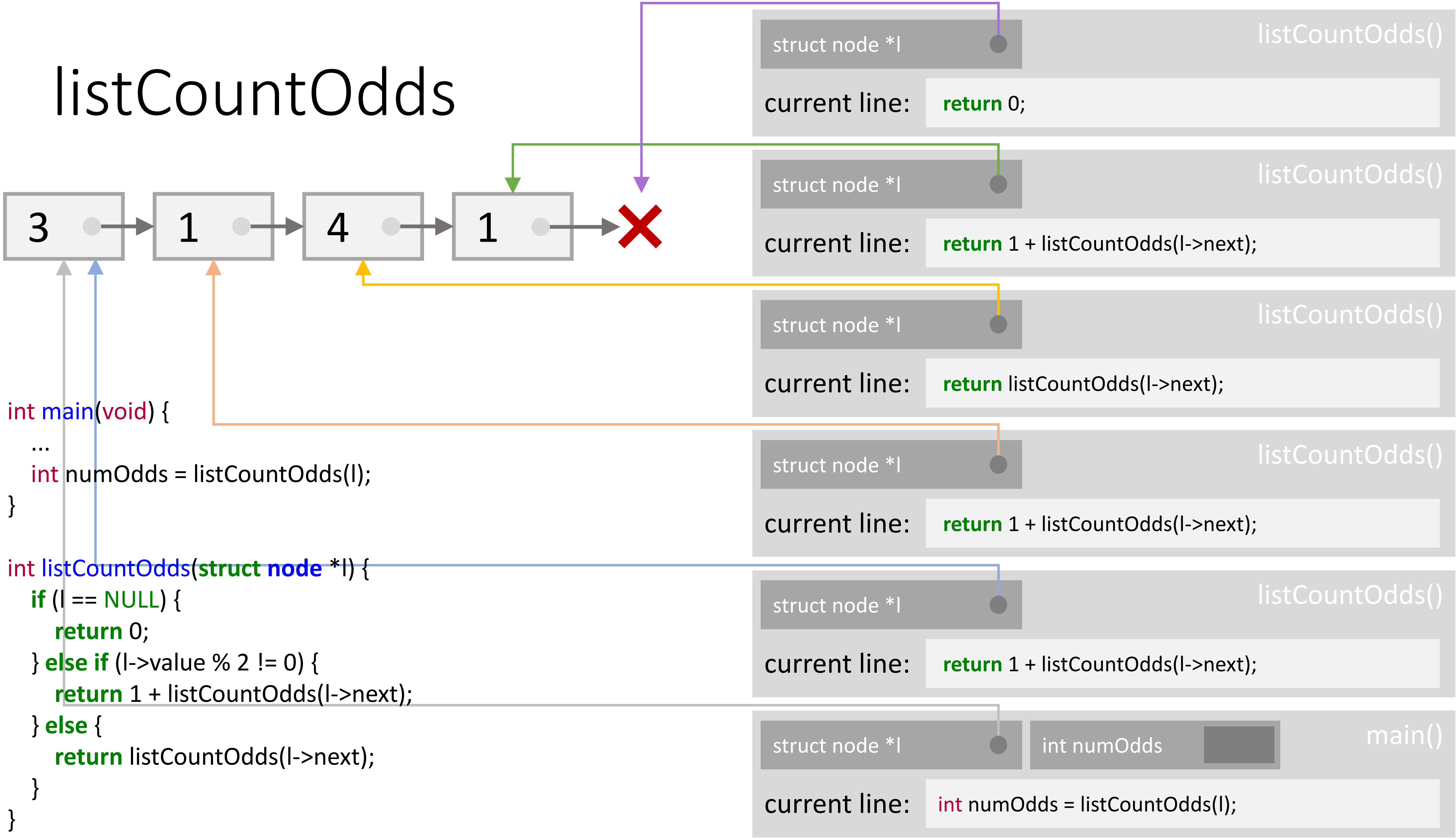
main()

struct node *l

int numOdds

current line: `int numOdds = listCountOdds(l);`

listCountOdds



struct node *l

current line: return 0;

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

listCountOdds()

struct node *l

current line: return listCountOdds(l->next);

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

listCountOdds()

struct node *l

int numOdds

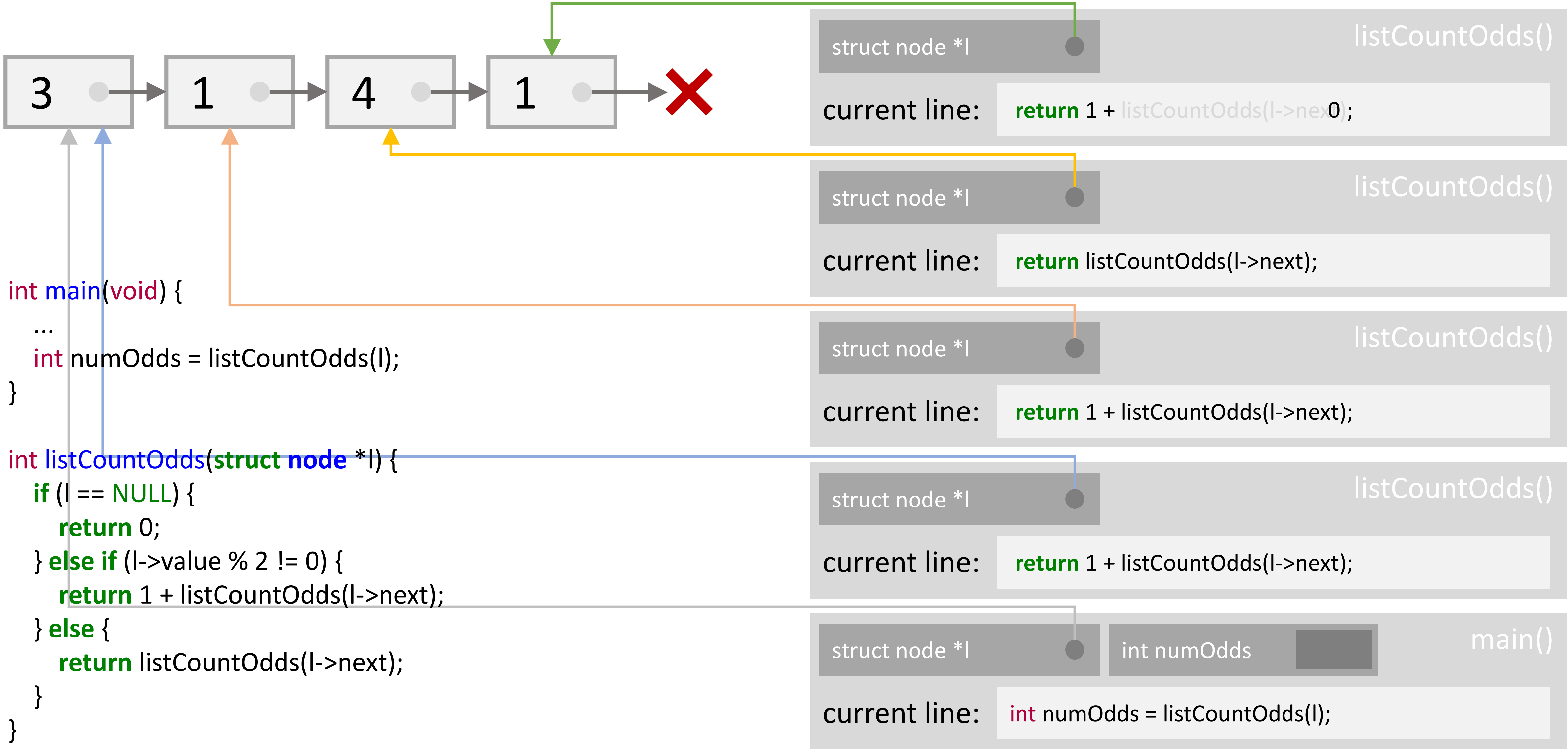
current line: int numOdds = listCountOdds(l);

main()

```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```

listCountOdds



listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->nex0);

listCountOdds()

struct node *l

current line: return listCountOdds(l->next);

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

listCountOdds()

struct node *l

current line: return 1 + listCountOdds(l->next);

main()

struct node *l

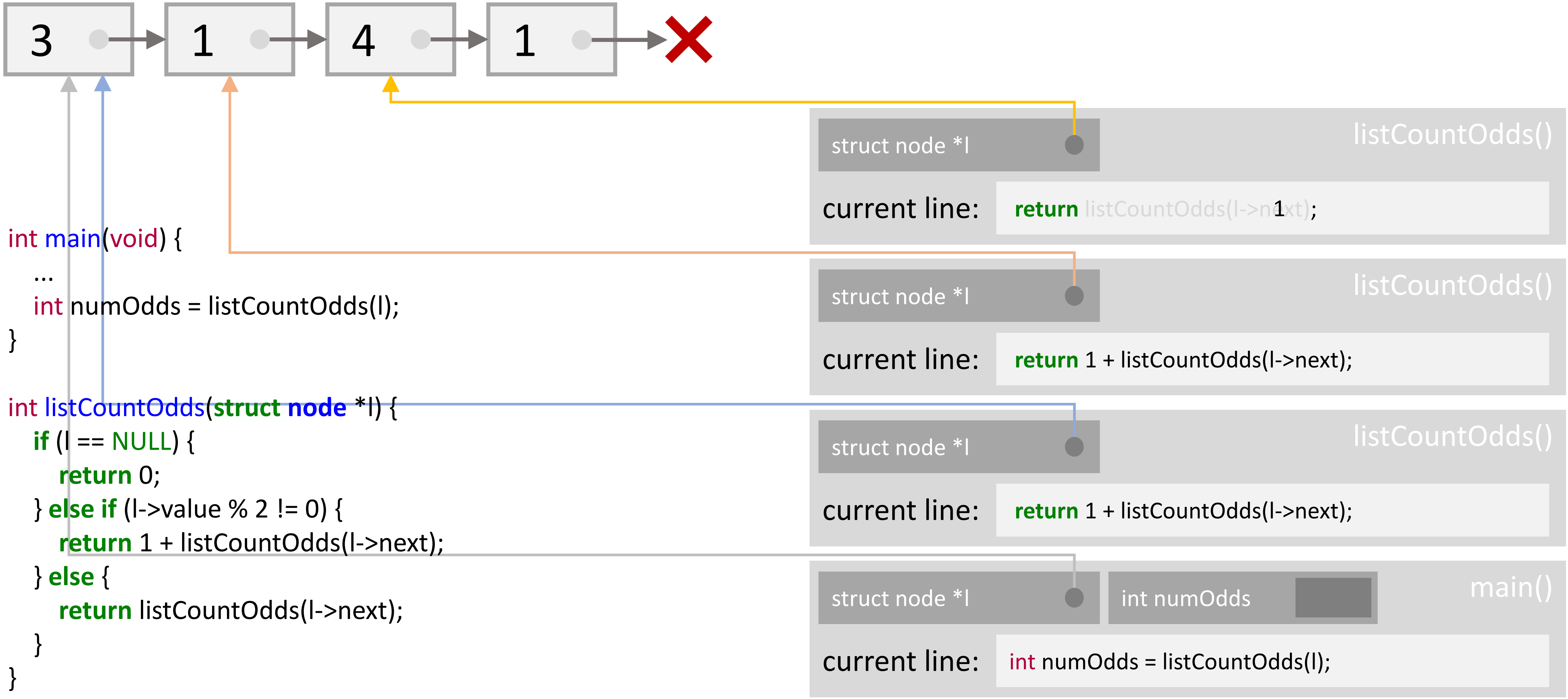
int numOdds

current line: int numOdds = listCountOdds(l);

```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```

listCountOdds



```
return 1;
```

```
return 1 + listCountOdds(l->next);
```

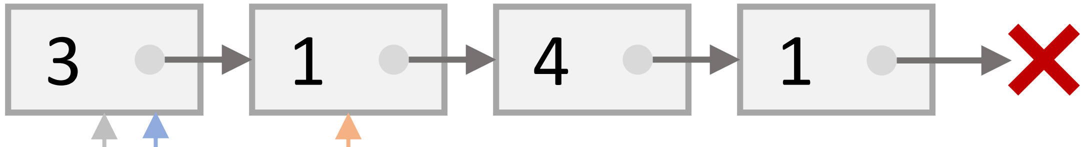
```
return 1 + listCountOdds(l->next);
```

```
int numOdds = listCountOdds(l);
```

```
int main(void) {
   ...
   int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
   if (l == NULL) {
      return 0;
   } else if (l->value % 2 != 0) {
      return 1 + listCountOdds(l->next);
   } else {
      return listCountOdds(l->next);
   }
}
```

listCountOdds



```
int main(void) {
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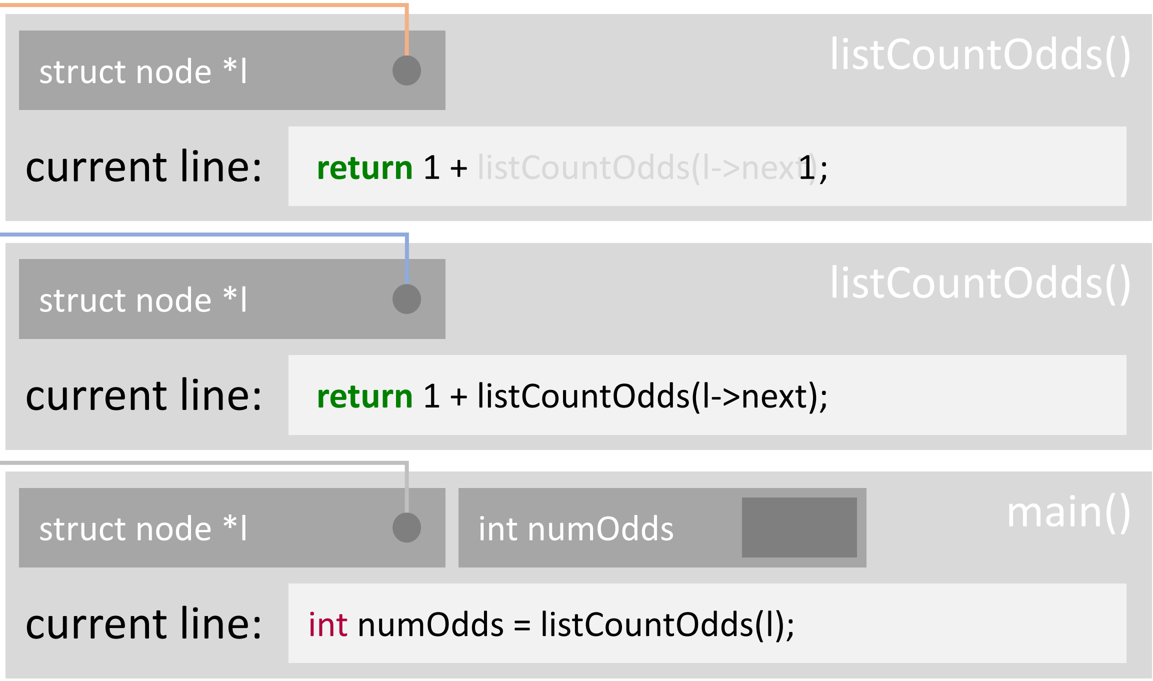
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```

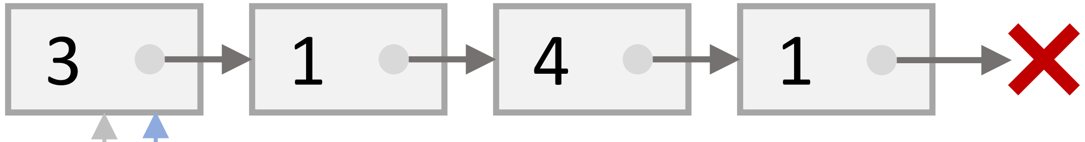


current line: `return 1 + listCountOdds(l->next)1;`

current line: `return 1 + listCountOdds(l->next);`

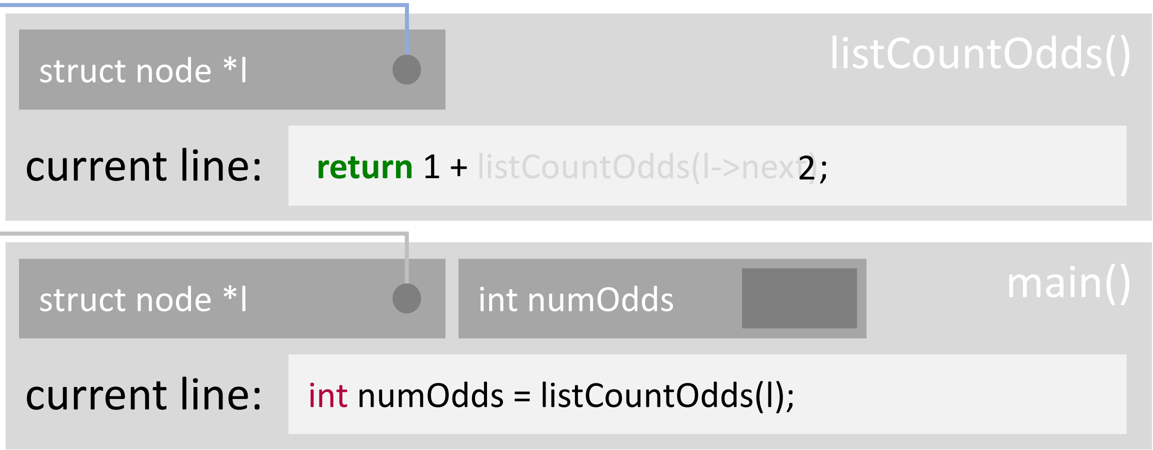
current line: `int numOdds = listCountOdds(l);`

listCountOdds



```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

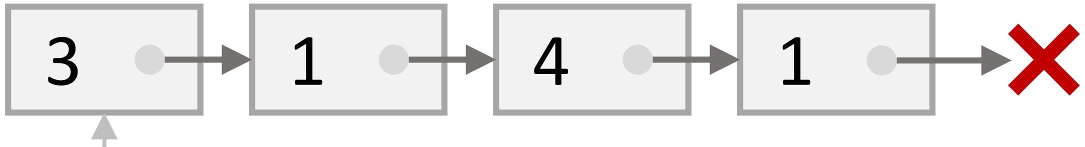
int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```



current line: `return 1 + listCountOdds(l->next2;`

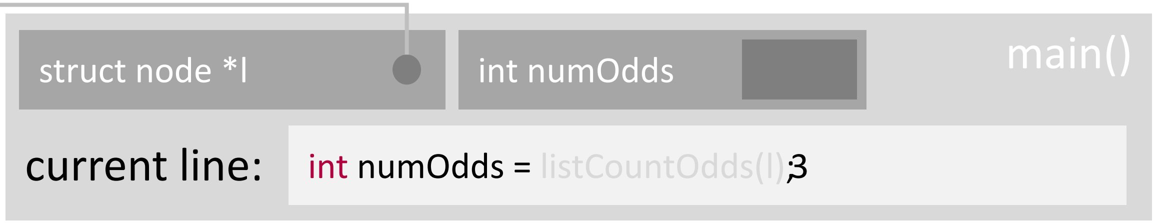
current line: `int numOdds = listCountOdds(l);`

listCountOdds

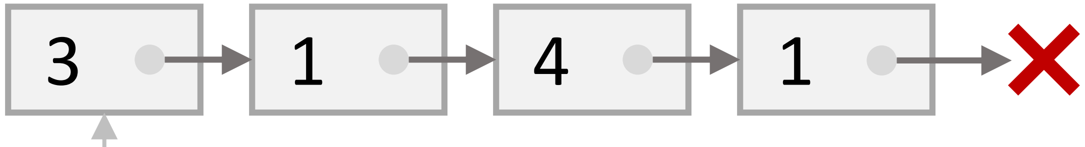


```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```

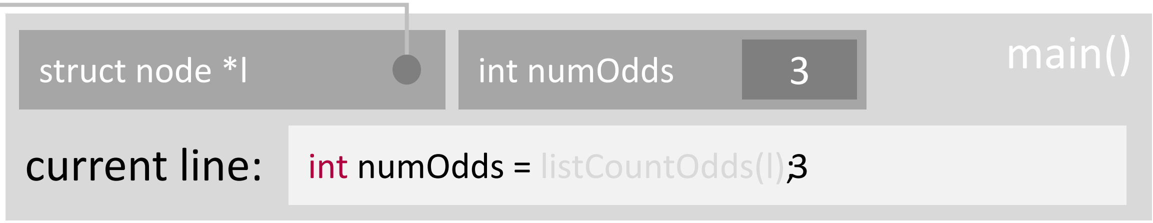


listCountOdds



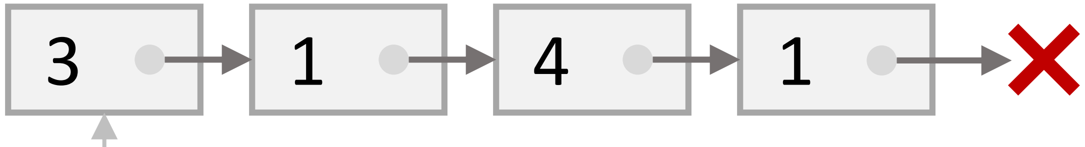
```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```



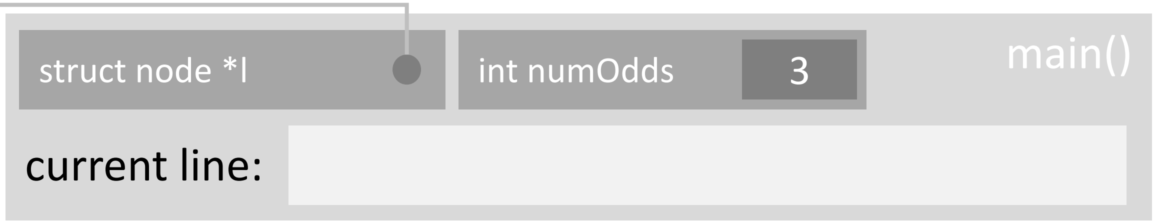
current line: `int numOdds = listCountOdds(l);3`

listCountOdds



```
int main(void) {
    ...
    int numOdds = listCountOdds(l);
}

int listCountOdds(struct node *l) {
    if (l == NULL) {
        return 0;
    } else if (l->value % 2 != 0) {
        return 1 + listCountOdds(l->next);
    } else {
        return listCountOdds(l->next);
    }
}
```


struct node *l
int numOdds
3
main()
current line: