

18/3/20

Assignment-4

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1 a) i) The return type of lambda expressions can be neglected in some cases

b)

```
double c = 12.3;
auto f = [&](double p) -> int {
    return c += p;
};
```

c) c) Error

d) c) Error

e) c) Error

f)

```
4.3
5.3
5
12
```

g)

```
13
14 13
```

h)

```
auto func = [&]() -> int { ++c;
    cout << c << endl;
    return 100.2;
};
```

i) 4344

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2. a) class decide {

public:

bool operator()(int x) {

return (x >= 0) & (x <= 10);

}

};

int main()

{ int a;

cin >> a;

decide what;

if (what(a))

cout << "Yes" << endl;

else

cout << "No" << endl;

return 0;

}

b) int main()

{ int a;

cin >> a;

auto what = [=](int x) -> bool {

return x >= 0 & x <= 10;

};

if (what(a)) cout << "Yes" << endl;

else cout << "No" << endl;

}

3 a) #include <bits/stdc++.h>
using namespace std;

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class hanoi {

public:

void operator()(int n, char s, char d, char in)

{ if (n == 0)
return;

if (n == 1)

{ printf("Disk 1, from %c to %c", s, d);
return;

}

this->operator()(n-1, s, i, d);

printf("Disk %d, from %c to %c", n, s, d);

this->operator()(n-1, i, d, s);

}

};

int main ()

{ int a;

cin >> a;

hanoi solve;

solve(a, 'A', 'C', 'B');

return 0;

b) #include <bits/stdc++.h>
using namespace std;

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int main()

{ int n;
cin >> n; function < void (int, char, char, char) > l;

l ~~return~~ = l (int n, char s, char d, char i)

→ void {

if (n == 0)

return;

if (n == 1)

{ printf("Disk 1, from %c to %c", s, d);

return;

}

~~return~~

l(n-1, s, i, d);

printf("Disk %n, from %c to %c", n, s, d);

l(n-1, i, d, s);

} ;

l(n, 'A', 'C', 'B');

return 0;

}