

# ECE 220 Computer Systems & Programming

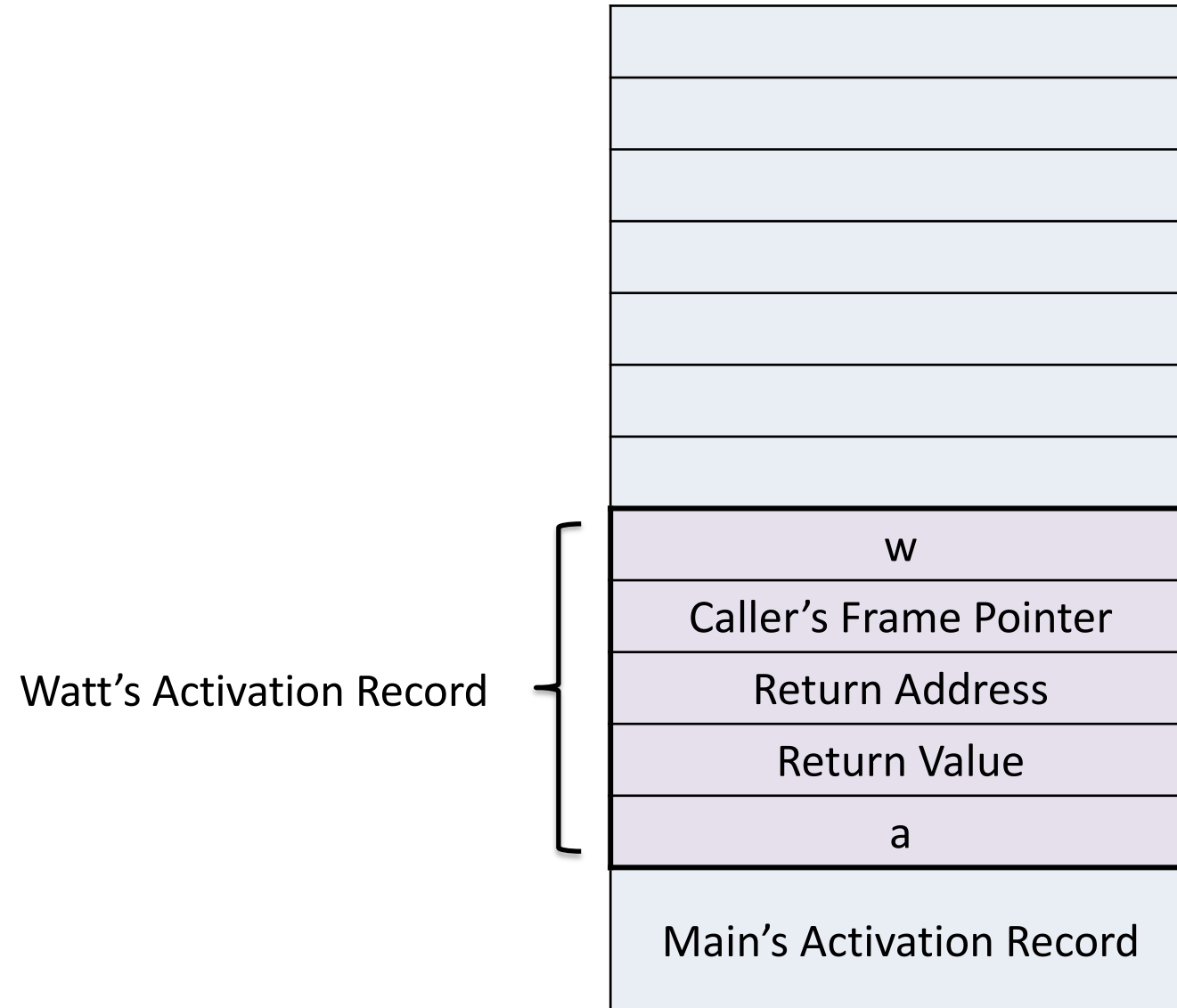
## Run-Time Stack



# Stack Built-up and Tear-down

- |                 |  |
|-----------------|--|
| Caller function | <ul style="list-style-type: none"><li>1. <u>caller setup</u>: push callee's arguments onto stack</li><li>2. pass control to callee (invoke function)</li></ul>   |
| Callee function | <ul style="list-style-type: none"><li>3. <u>callee setup</u>: push bookkeeping info and local variables onto stack</li><li>4. execute function</li><li>5. <u>callee teardown</u>: pop local variables, caller's frame pointer, and return address from stack</li><li>6. return to caller</li></ul> |
| Caller function | <ul style="list-style-type: none"><li>7. <u>caller teardown</u>: pop callee's return value and arguments from stack</li></ul>  |

# Stack Built-up/Tear-down





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