

j Main

```
exp:
addi x2, x2, -16 # making 2 spots in stack
sw x7, 8(x2)     # storing x7 as second spot in stack
sw x1, 0(x2)     # storing x1 as first spot in stack
addi x5, x0, 5   # x5 = x0 + 5
```

```
jal x1, power # jumping to power function
lw x1, 0(x2)   # storing new value of x1 into stack
add x7, x8, x7 # x7 = x8 + x7
addi x5, x0, 0 # x5 = x0 + 0
addi x5, x5, 3 # x5 = x5 + 3
```

```
jal x1, power # jumping to power function
lw x1, 0(x2)   # storing new value of x1 into stack
add x13, x0, x8 # x13 = x0 + x8
addi x12, x0, 6 # x12 = x0 + 6
```

```
jal x1, times # jumping to times function
lw x1, 0(x2)   # storing new value of x1 into stack
add x7, x30, x7 # x7 = x30 + x7
addi x12, x0, 3 # x12 = x0 + 3
add x13, x0, x6 # x13 = x0 + x6
```

```
jal x1, times # jumping to times function
lw x1, 0(x2)   # storing new value of x1 into stack
add x7, x30, x7 # x7 = x30 + x7
addi x7, x7, 4  # x7 = x7 + 4
lw x1, 0(x2)   # storing new value of x1 into stack
addi x2, x2, 16 # x2 = x2 + 16
jalr x0, 0(x1)  # leaves to Main Function
```

```
power:
addi x2, x2,-8 # making 1 spot in a stack
sw x1, 0(x2)   # storing x1 in 1st spot in a stack
add x8, x0, x0 # x8 = x0 + x0
add x15, x0, x0 # x15 = x0 + x0
addi x8, x8, 1 # x8 = x8 + 1
add x22, x0, x0 # x22 = x0 + x0
```

```
PLoop:
bge x15, x5, ExitPLoop # checking if x15 is greater than or equal to x5 and heads to ExitPowerLoop
mul x8, x8, x6 # x8 = x8 * x6
addi x15, x15, 1 # x15 = x15 + 1
jal x0, PLoop # jumping to PowerLoop
```

```
ExitPLoop:
lw x1, 0(x2) # storing new value of x1 into stack
addi x2, x2, 8 # x2 = x2 + 8
jalr x0, 0(x1) # leaves to Main Function
```

```
times:
addi x2, x2, -8 # x2 = x2 + (-8)
sw x1, 0(x2)   # storing x1 values from stack
mul x30, x13, x12 # x30 = x13 * x12
lw x1, 0(x2)   # storing new value of x1 into stack
addi x2, x2, 8 # x2 = x2 + 8
jalr x0, 0(x1)  # leaves to Main Function
```

```
Main:
addi x6, x0, 1 # x6 = input
jal x1, exp # jumping to Exp Function
addi x10, x0 1 # x10 = x0 + 1
add x11, x0, x7 # x11 = x0 + x7
ecall # print to console
```