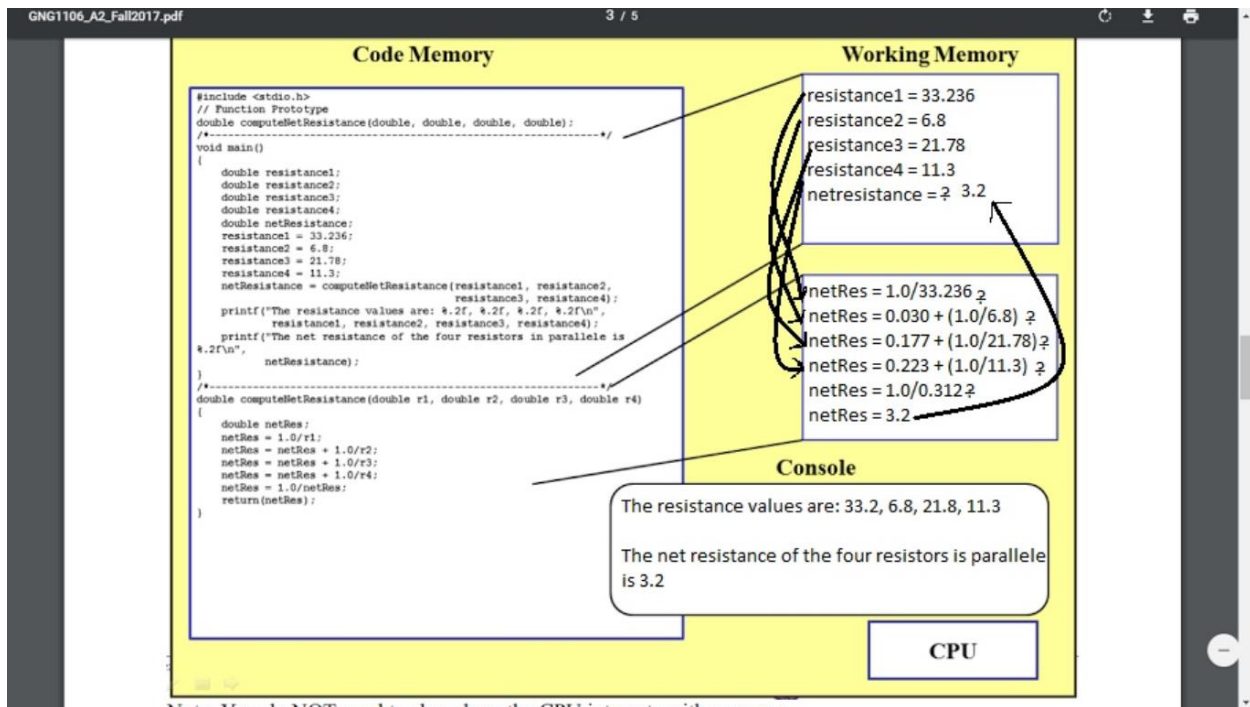
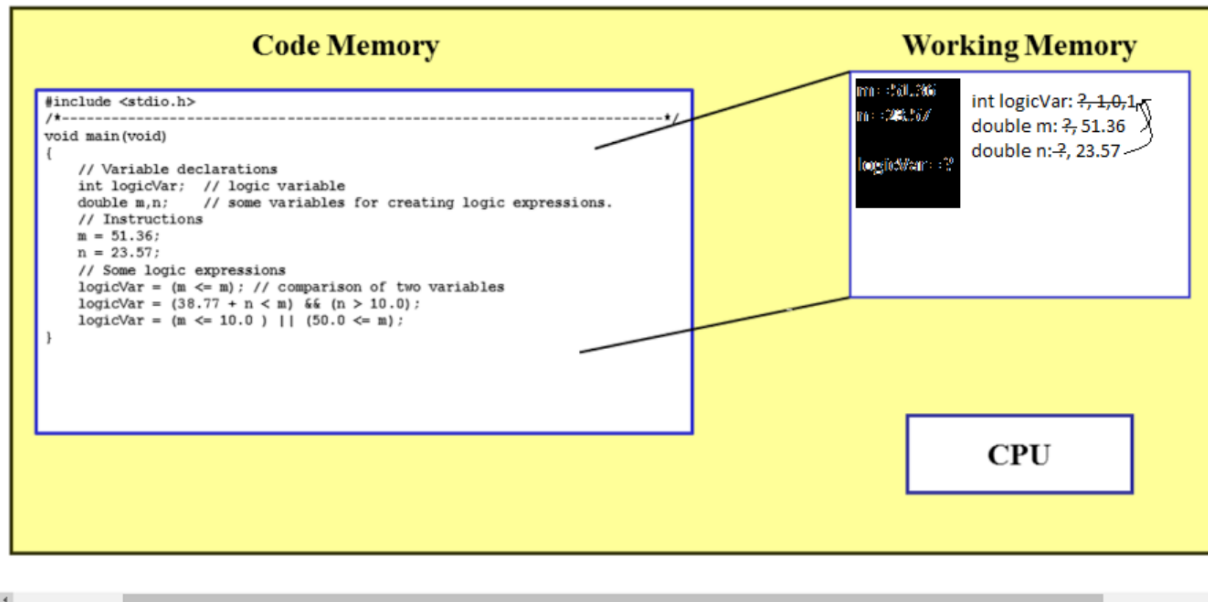


Variable name $\int, \mathbb{Z}, \phi, \mathbb{A}, 10$



Note: You do NOT need to show how the CPU interacts with memory.

```

#include <stdio.h>
#include <math.h>
#define E0 8.85e-12
// function prototypes
double forcecalculation();
/*-----
-
Function: main
Description: declairs variables and sends them to the foce function
for calculation
-----
--*/
void main()
{
    // Variable declarations
    double Q,q,R,force,x;
    printf("please enter the charge on the rings Q:");
    scanf("%lf" ,&Q);
    printf("please enter the charge on the point q:");
    scanf("%lf" ,&q);
    printf("please enter the radius of the ring R:");
    scanf("%lf" ,&R);
    printf("please enter the distance between the center of the ring and
the point: ");
    scanf("%lf" ,&x);
    // Instructions
    force = forcecalculation(Q,q,R,x);
    printf("The charge on the ring is:%f coulombs.\n" ,Q);
    printf("The charge on the point is: %f coulombs.\n" ,q);
    printf("The radius of the ring is: %f m\n" ,R);
    printf("The distance between the center of the ring and the point is:
%f m \n" ,x);
    printf("The force exerted on the point is: %e newtons \n" ,force);
}
/*-----
---
Function: function_name
Parameters:
    x - description of parameter x
Return: Description of value returned.
Description: Insert a short description of what the function does.
Modify
    the function name. Change the type of the return value
if
    required. Change the parameter list. Align the
prototype.
-----
--*/
double forcecalculation(double Q, double q, double R, double x)
{
    // Variable declarations
    double answer;

```

```

    answer = (R*R)+(x*x);
    answer = Q*q*x/(pow(answer,1.5));
    answer = answer/ (4*M_PI*E0);
    return (answer);
    // Instructions
}

```

