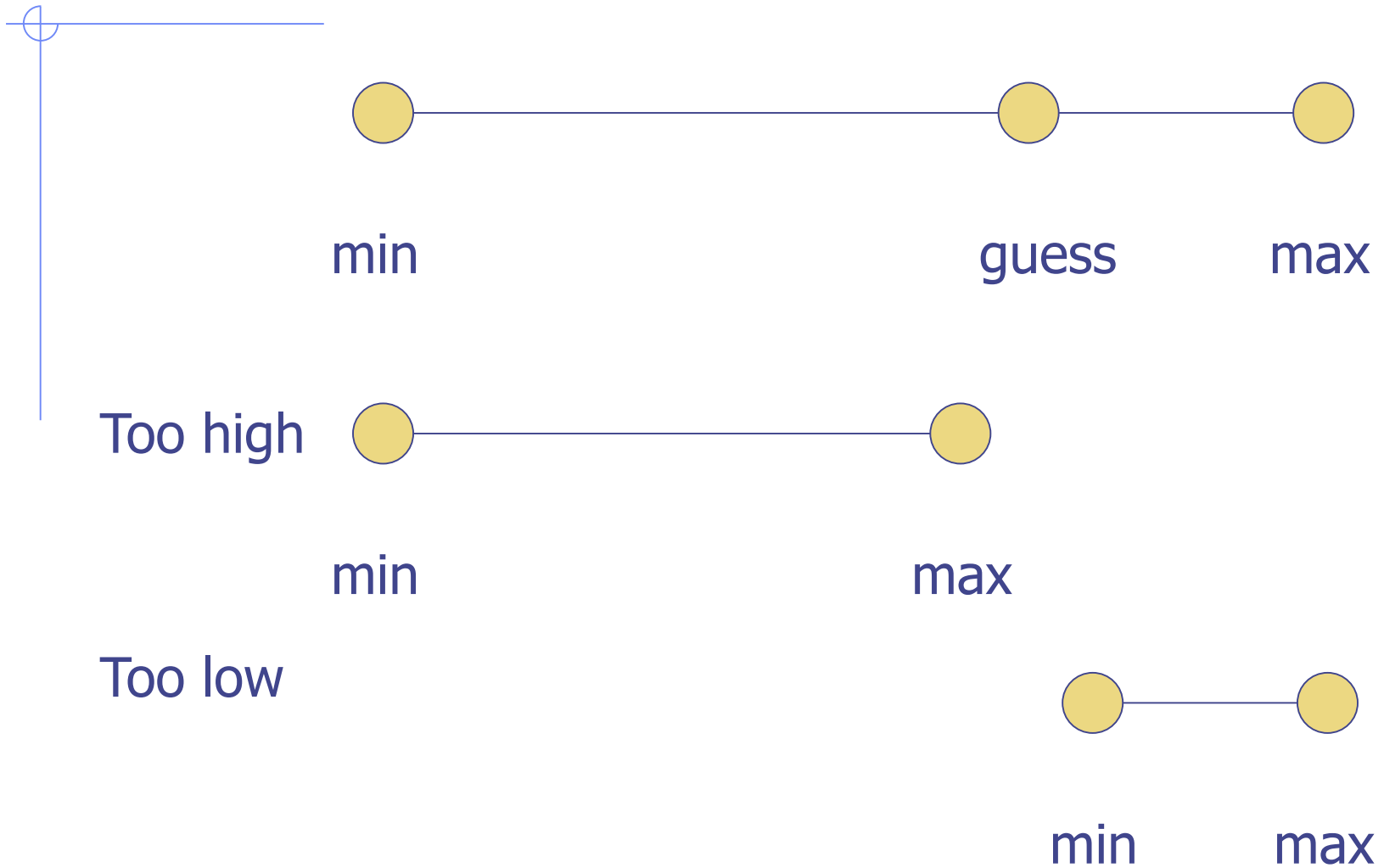
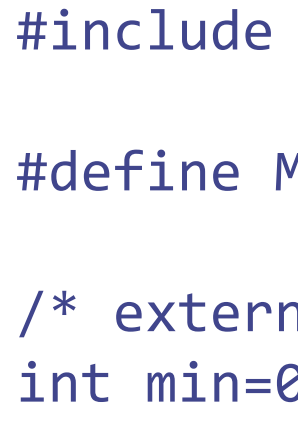


# Lesson 5: Guessing Numbers

Jiun-Long Huang  
Department of Computer Science  
National Chiao Tung University







```
#include <stdio.h>

#define MAX_NUMBER 100

/* external variable */
int min=0, max=MAX_NUMBER;

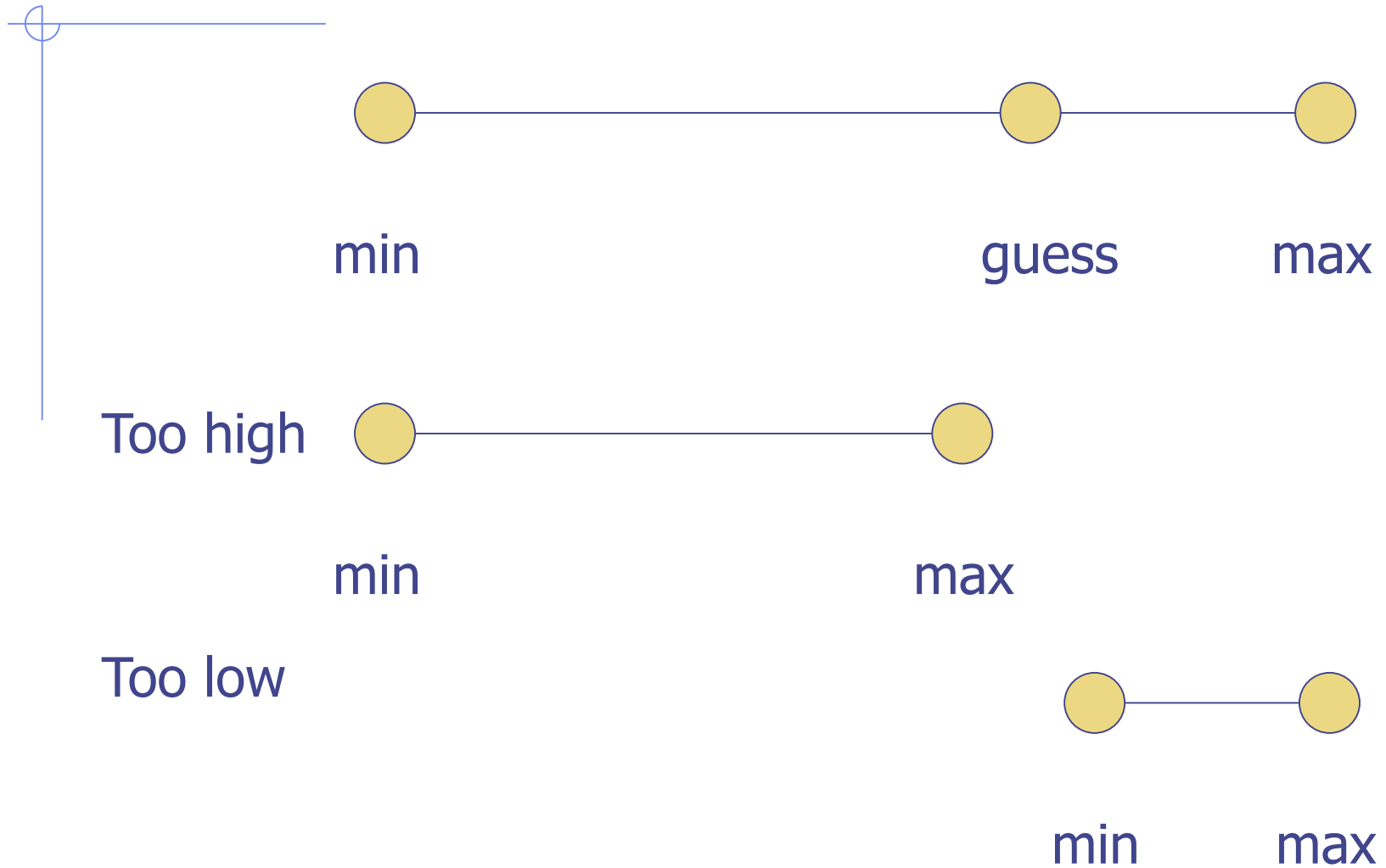
/* prototypes */
void guess(void);
```

```
int main(void)
{
    min=0;
    max=MAX_NUMBER;
    printf("Please choose your secrete number.\n");
    guess();

    return 0;
}
```

```
void guess(void)
{
    int mid;
    char command;
    while(1) {
        printf("min: %d, max: %d\n",min, max);
        if (max<min)
        {
            printf("You cheat!!!\n");
            return;
        }
        mid=(min+max)/2;
        printf("Is your secret number %d? (Y/B/S)\n", mid);
```

```
while(1) {  
    printf("Y/y: Yes, B/b: Too Big, S/s: Too Small\n");  
    scanf("%c", &command);  
    if (command == 'Y' || command == 'y') {  
        return;  
    }  
    else if (command == 'B' || command == 'b') {  
        max=mid-1;  
        break;  
    }  
    else if (command == 'S' || command == 's') {  
        min=mid+1;  
        break;  
    }  
    else  
        break;  
}  
}  
}
```





```
/* Asks user to guess a hidden number */
```

```
#include <stdio.h>
```

```
#define MAX_NUMBER 100
```

```
/* external variable */  
int min=1, max=100;
```

```
/* prototypes */  
void read_guesses(void);
```



```
int main(void)
{
    printf("Guess the secret number (1~%d).\n\n",
           MAX_NUMBER);
    read_guesses();

    return 0;
}

void read_guesses(void)
{
    int guess, mid;
    while(1) {
        printf("Enter your guess: ");
        scanf("%d", &guess);
        mid=(min+max)/2;
```

```
if (guess == min && guess == max) {  
    printf("Correct.\n");  
    return;  
} else if (guess >= mid) {  
    max=guess-1;  
    printf("Too high, try again.\n");  
}  
else { /* guess < mid */  
    min=guess+1;  
    printf("Too low, try again.\n");  
}  
}  
}
```