LAB ASSIGNMENT 15

Intervals: A range of consecutive integers is denoted by a starting and ending value, where the starting value is less than or equal to the ending value. For example, the range [18, 22] includes the integers 18, 19, 20, 21 and 22. Consider the task of writing a function that is given two ranges that determines whether or not the two ranges intersect. For example, [18,22] and [13, 19] do intersect, but [33, 88] and [90, 2000] do not. Complete the function below so that it returns 1 if the two ranges specified intersect, and 0 if they do not. The first range will be [start1, end1] and the second range will be [start2, end2], where start1, end1, start2 and end2 are the four formal parameters to the function. Make sure to fill in the code according to the comments given.

```
#include <stdio.h>

struct range{
  int start;
  int end;
};

int overlap(struct range interval1, struct range interval2)
{
   if(interval2.end < interval1.start)
      return 0;
```

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```
    else if(interval1.end < interval2.start)
        return 0;

    else
      return 1;
}

int main()
{
    struct range inter1, inter2;

    printf("Enter value of [start1 , end1]: ");
    scanf("%d %d", &inter1.start, &inter1.end);

    printf("Enter value of [start2 , end2]: ");
    scanf("%d %d", &inter2.start, &inter2.end);

    if(overlap(inter1, inter2))
      printf("Given intervals intersect");

    else
      printf("Given intervals do not intersect");
```

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```
    return 0;
}
```

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