**代码（Golang）**：

package main  
import (  
 "crypto/rand"  
 "fmt"  
 "math"  
 "math/big"  
 "strconv"  
)  
func main() {  
 var count int64 //统计冲突次数  
 var sample = 1000 //试验次数  
 var rate float64  
 var sampleRange int64  
 sampleRange = int64(math.Pow(2,32)) //2^32的范围内取取随机数  
 count = match(sampleRange,sample) //计算实验中的重复次数  
 fmt.Printf("count = %d\n",count)  
 rate = (float64(count)/float64(sample))\*100  
 fmt.Printf("rate is %.3f\n",rate)  
}  
func match(Range int64 ,sample int) int64 { //把t和试验次数传进参数  
 var count int64 = 0 //计重复次数  
 var nums [80000]int  
 for i := 0; i < sample; i++ {//重复统计  
 nums = Rond(Range)//生成随机数组  
 //开始判断是否有相同的数，相同则记一次  
 if containsDuplicate(nums) == true{  
 count += 1  
 }  
 }  
 return count  
}  
func Rond(Range int64) [80000]int{//t= 80000  
 var arr[80000] int  
 for i := 0; i < 80000; i++{  
 result, \_ := rand.Int(rand.Reader, big.NewInt(Range))  
 number := result.String()  
 //fmt.Println(number)//打印随机生成的  
 num, err := strconv.Atoi(number)  
 if err == nil{  
 //fmt.Printf(" ")  
 }  
 arr[i] = num  
  
 }  
 return arr  
}  
func containsDuplicate(num [80000]int) bool {//判断是否冲突  
 set := map[int]struct{}{}  
 for \_ , v := range num {  
 if \_, has := set[v]; has {  
 return true  
 }  
 set[v] = struct{}{}  
 }  
 return false  
}

代码上传地址：

https://gitee.com/shan-yitian/golang/blob/master/Birthday%20Paradox.go

**实验结果**：

