Quiz 2

par fd[0] — fd2[0]
par fd[1] — fd2[1]

Course: Operating Systems | Course Code: CS 2006
Section: BSE-5A | Total Marks:10
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Question 1: [10 Marks]

Imagine a scenario where a parent process interacts with a child process to create a guessing game. Initially, the parent process prompts the user to input an integer number. This number is then transmitted to the child process through a pipe. Subsequently, the child process will compare that number with an already stored secrete number. If the number match, then the child process communicates this information back to the parent process through the pipe. In the case of mismatch, the child process will also inform parent about failure and then the parent process prompts the user again to input a number and transmits it to the child process. This iterative process continues until the child process either successfully guesses the number or exhausts the maximum limit of 5 attempts. Given the skeleton code below you are required to complete the missing portion of the code.

```
int main {
    int fd1[2]; int fd2[2]
    int rv = pipe(fd1); int rv2 = pipe(fd2);
    int num; int cpid = fork(); if(cpid==-1){ cout<<"failed"; return }
    for(int i=0; i<5; i++){
      if(cpid>0){
      cout<<"Enter a number"<<endl;
      cin>>num;
      close(fd2[1]);
      write(fd1[1], num, 8);
      close(fd1[0]); int buff
      read(fd2[0], buff, 8);
      if( buff[0] ==1){
          cout<<"Number gussed"<<endl;
          return;
      }cout<<"Incorrect Number"<<endl;
      }
    else if(cpid==0){
        close(fd1[1]);
        close(fd2[0]);
      int secret=1122;
      int check;
     read(fd1[0], check, 8);
      int flag;
```

```
if (check == secret)
  { flag = 1;
    write (fd2[1], flag, 8)
  }
  else{
    flag = 0;
    write (fd2[1], flag, 8);
  }
}}
cout << " 5 limits exhausted "<< endl;
return 0;
}
```