Re: interview question on primes

Source: http://sci.tech−archive.net/Archive/sci.math/2008−02/msg04174.html

- *From*: quasi <quasi@xxxxxxxx>
- *Date*: Mon, 25 Feb 2008 23:52:19 −0500

On Mon, 25 Feb 2008 20:13:45 −0800, "1787" <nobody@xxxxxxxx> wrote:

> "quasi" <quasi@xxxxxxxx> wrote in message
> news:7ar6s39mvi8cgr09h9umkhhjb1r7gjp4l9@xxxxxxxxxx
>
> > On Tue, 26 Feb 2008 12:28:27 +1100, "Peter Webb"
> > <webbfamily@xxxxxxxxxxxxxxxxxxxxxxxxx> wrote:
> >
> > > "Digital Puer" <digital_puer@xxxxxxxxxxx> wrote in
> > > message
> > > news:3bdc49e5−d202−491a−bde2−c7c31bee801f@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
> > >
> > > > Got this on a software engineering interview
> > > > question:
> > > > given two integers A and B, find all primes
> > > > between them.
> > > >
> > > > I basically wrote an initial function, bool
> > > > isPrime(int i), which
> > > > loops over all numbers between 2 and sqrt(i)
> > > > to see if i%num == 0,
> > > > in which case the number is not a prime.
> > > > With this function, I then
> > > > loop between A and B, calling isPrime() on
> > > > each value.
> > > >
> > > > Any better ideas?
> > >
> > > The "correct" answer is heavily dependent on the range of
> > > values of A and
> > > B,
> > > and if this is all the question states, its a pretty poor question.

> No, not really.
>
> It's a real world question, not an academic one.
>
> Moreover, the question was not a "take−home project". Presumably it was expected to solved right then and there, at the interview.
>
> Judgement is required here.
>
> Of course, the applicant can always _ask_ the interviewer about the range of values, but in my opinion, having to ask that question would show a lack of common sense. The very fact that the range was not specified, together with the implied time constraints of the interview, should be enough for the applicant to opt for a clean, simple, standard solution.
>
> quasi

> The OP was asked to find the primes between A and B. His answer was essentially to write the simplest of all programs to determine primality and test all the numbers between A and B. This is about as far from a "real world" answer as you can get. He was obligated to ask questions to more accurately determine the scope of the problem. The useful answer then would be to suggest algorithms that will actually find the primes for values of A and B appropriate to their absolute and relative magnitudes. Peter Webb (first responder to the OP's question) gets the job.

No he doesn't −− not if I'm hiring.

The fact is, most programmers in the world are bad ones.

Separating good from bad at interview time is not so easy, but a simple challenger exercise, at the level of difficulty of the one being discussed, is not so bad as a quick test, at least to filter out

(1) those who are incompetent mathematically

(2) those who have no design skills

(3) those who can't program their way out of a paper bag

(4) those who write overly complex code when the context of the situation (interview time, on the spot) calls for simplicity.

quasi
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