Question: Consider the following class definitions:

```cpp
#include <iostream>
#include <string>
using namespace std;
class Animal
{
    int limbs;
    string eatinghabits;
public:
    Animal(int limbs_,string eh):eatinghabits(eh){limbs=limbs_;}
    int getLimbs() const { return limbs;}
    string getEatingHabits() const {return eatinghabits;}
    void print()
    {
        cout << "Animal's print function" << endl;
        cout << "It is a " << eatinghabits << endl;
        cout << "It has " << limbs << " limbs" << endl;
    }
};
class Cat: public Animal
{
    string breed;
    string color;
public:
    Cat(string color, string breed):Animal(4,"carnivorous"),
        breed(breed),color(color) {}
    void print()
    {
        cout << "Cat's print function" << endl;
        cout << "It is a " << getEatingHabits() << endl;
        cout << "It has " << getLimbs() << " limbs" << endl;
    }
    void printBreed() {cout << "The Cat's breed is: " << breed << endl;}
};
class Rabbit: public Animal
{
    string type;
    string color;
public:
    Rabbit(string type, string color):Animal(4,"herbivorous"),
        type(type),color(color) {}
    void print()
    {
        cout << "Rabbit's print function" << endl;
        cout << "It is a " << getEatingHabits() << endl;
        cout << "It has " << getLimbs() << " limbs" << endl;
        cout << "It is a " << type << endl;
        cout << "Its color is " << color << endl;
    }
};
```
We are providing you two main() functions. For each of these, indicate whether the main() will run correctly. If so, what would be the output? And if not, what type of error (compile time, run time, or logical) will be encountered?

<table>
<thead>
<tr>
<th>int main()</th>
</tr>
</thead>
<tbody>
<tr>
<td>{</td>
</tr>
<tr>
<td>Cat* myCat;</td>
</tr>
<tr>
<td>Rabbit *rabbit;</td>
</tr>
<tr>
<td>Animal* animal;</td>
</tr>
<tr>
<td>myCat=new Cat(&quot;siamese&quot;,&quot;brown&quot;);</td>
</tr>
<tr>
<td>rabbit=new Rabbit(&quot;wild&quot;,&quot;white&quot;);</td>
</tr>
<tr>
<td>animal=myCat;</td>
</tr>
<tr>
<td>animal-&gt;print();</td>
</tr>
<tr>
<td>rabbit-&gt;print();</td>
</tr>
<tr>
<td>return 0;</td>
</tr>
<tr>
<td>}</td>
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</tbody>
</table>

Run Correctly? (Yes/No)  Yes
What kind of error(s)?  N/A
Reason  N/A
Output
Animal's print function
It is a carnivorous
It has 4 limbs
Rabbit's print function
It is a herbivorous
It has 4 limbs
It is a wild
Its color is white

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<th>int main()</th>
</tr>
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<tr>
<td>{</td>
</tr>
<tr>
<td>Cat kitty(&quot;persian&quot;,&quot;white&quot;);</td>
</tr>
<tr>
<td>Cat&amp; myCat=kitty;</td>
</tr>
<tr>
<td>Rabbit bunny(&quot;wild&quot;,&quot;white&quot;);</td>
</tr>
<tr>
<td>Rabbit &amp;rabbit=bunny;</td>
</tr>
<tr>
<td>Animal &amp;kitten=kitty;</td>
</tr>
<tr>
<td>kitten.printBreed();</td>
</tr>
<tr>
<td>return 0;</td>
</tr>
<tr>
<td>}</td>
</tr>
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</table>

Run Correctly? (Yes/No)  No
What kind of error(s)?  Compile Time
Reason
kitten is an Animal& and the printBreed() method is not declared/defined for Animal. In other words, static type of kitten is Animal which does not implement the method printBreed(), hence the 2nd last statement in main fails.

Output  N/A